

**Marine Life Protection Act Initiative  
Public Comments Submitted  
through September 8, 2010**

**From:** John Moran  
**Sent:** Friday, September 03, 2010 7:25 PM  
**To:** MLPAComments  
**Subject:** Disturbed to know

Hello MLPA people,

I am deeply disturbed to know that the MLPA is infringing on indigenous gathering rights. I am not a Native person and am very ecologically minded. I find it very difficult to believe that you could not accommodate LEGAL indigenous gathering into your plan; effectively acknowledging the difference between commercial fishing, poaching, and traditional harvesting. As many Native people are arguing, it is obviously disrespectful of their culture and rights to ancient cultural practices. As a California citizen, teacher, and former state park naturalist; I am disgraced to know that the MLPA has been unable to recognize California's original cultures and vital relationship with the coast. I hope you will reconsider this aspect of your plan.

Thank You,

John Moran  
Orinda, CA

**From:** John Corbett  
**Sent:** Tuesday, September 07, 2010 12:40 PM  
**To:** MLPAComments  
**Cc:** Megan Rocha; Satie Airame; Ken Wiseman  
**Subject:** Questions

Satie Airame on September 03, 2010 2:43 PM sent an e-mail recommending that I forward the Yurok Science questions to [MLPAComments@resources.ca.gov](mailto:MLPAComments@resources.ca.gov). address. This is opposed to past requests to submit the questions to Satie Airame so as to avoid ex-parte contacts. In the past we have also been informed both in private and in the public meeting process that questions have to be asked by the BRTF or requested by staff to be valid. It appears that this process is much more open and I commend you for it. I have attached the requested questions and ask that they become part of the public record and request that they will be immediately forwarded to the SAT. I assume that this submittal conforms to your ex-parte rules. If not, please notify me immediately.

John

## MLPA Questions

What species in the intertidal reaches of the North Coast Region would subject human harvesters to paralytic shell poisoning from toxin-producing dinoflagellate *Alexandrium catenella* (formerly *Protogonyaulax catenella* and *Gonyaulax catenella*) and Domoic Acid Toxicity and *Pseudo-nitzschia australis* ) formerly *Nitzschia pseudoseriata*)? The Tribe has identified the following list: bivalve shellfish (mussels, clams, scallops, oysters), barnacles, and fish anchovy. Please confirm the list and identify any other California intertidal species subject to paraletic shell fish poisoning or Domoic Acid Toxicity.

What is the annual sediment load of the Eel, Mad, and Klamath Rivers discharged to the Marine environment?

Is the quantity sediment load from the Eel, Mad, and Klamath Rivers considered significant compared to other river in California?

How is the distribution of suspended sediments affected by currents? Include an analysis of all North/south currents along the coast.

What are the effects on opacity of river discharged suspended sediments from the Klamath, Mad, and Eel Rivers.

What months the sediment discharges are the highest for the Eel, Klamath, and Mad Rivers.

Compare the chlorophyll columns or images from North of the Eel River to the Oregon border to the chlorophyll columns or images in San Diego and from the nearest data point in Mendocino from Van Damme State Park South. Are the chlorophyll columns or images higher North of the Eel River to the Oregon border than in San Diego or the nearest data point in Mendocino from Van Damme State Park South?

Does the up welling of water from deeper areas contribute to Chlorophyll columns?

Does the lack of ocean water opacity in the waters north of the Eel River to the Oregon border affect the growth of kelp?

Compare the opacity of the waters from the Eel River north to the Oregon border with the visibility in San Diego.

Are murky waters a contributing factor to a high rate of shark attacks in Del Norte and Humboldt County compared to the rest of California?



THIS LETTER ALSO SENT VIA EMAIL

Dale Maharidge  
P.O. Box 222  
Petrolia, California 95558

MLPA Initiative  
NCSR Blue Ribbon Task Force  
California Natural Resource Agency  
1416 Ninth St., Suite 1311  
Sacramento, California 95814

August 31, 2010

Hello,

I own a piece of land on Prosper Ridge near Petrolia, a piece of the ocean headland right above Punta Gorda. I purchased my land 15 years ago and have worked very, very hard to create an off the grid home here. I have spent over a quarter of a million dollars doing this.

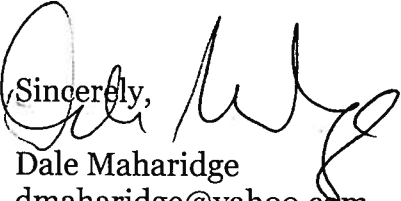
A big part of my purchasing this land was the lifestyle in Petrolia, and a huge part of that lifestyle is fishing and gathering shellfish on the ocean reefs right below my home.

If the full Punta Gorda closure were put in effect to create a marine sanctuary, it would severely harm the reason I moved here--and in turn harm my property value. It will also harm other businesses in Petrolia, the bed and breakfasts, the store, and so on, because tourists who camp on the beach in the BLM campground also in part come for shore fishing.

I am writing to support the Petrolia "shapes" proposal, which will create three zones and fulfill the needs of the sanctuary, yet preserve our lifestyle and our small local businesses.

I am a strong supporter of creating marine reserves in California. But they must be done with balanced consideration of commercial fishermen and locals in places such as Petrolia.

Sincerely,



Dale Maharidge  
dmaharidge@yahoo.com  
707-629-3377

Dear Melissa,

I am forwarding the annual report of the Yurok Fisheries Department. This will be followed up with some additional scientific projects the Tribe is working on. John



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RESOURCES AGENCY OF CALIFORNIA



## **Yurok Tribal Fisheries Program**

### **2010 Annual Summary of Projects**



## **Yurok Tribal Fisheries Program Staff**

**Dave Hillemeier – Fisheries Program Manager**

### **Lower Klamath Division**

**Monica Hiner – Senior Fisheries Biologist**  
**Dave Weskamp - Fisheries Biologist II**  
**Sarah Beesley - Fisheries Biologist II**  
**Andrew Antonetti - Fisheries Biologist**  
**Scott Silloway – Fisheries Biologist**  
**Carl Anderson – Fisheries Biologist**  
**Delmer “Seagull” Jordan - Fisheries Technician III**  
**Aldaron McCovey - Fisheries Technician III**  
**Anthony “AJ” Webster – Fisheries Survey Lead**  
**Steve Nova Jr. – Fisheries Technician II**  
**Robert Grubbs – Fisheries Technician II**  
**Dwayne Davis – Fisheries Technician II**  
**Gil Caleja – Fisheries Technician I**  
**Nick Folkins – Fisheries Technician I**  
**Nemetchay Bates – Fisheries Technician II**  
**Josh Jimenez – Fisheries Technician I**  
**Ryan Ray-Fisheries Technician I**  
**Justin Coldwell-Fisheries Technician I**  
**Caultipshaun Donahue-Fisheries TechnicianI**

### **Harvest Management Division**

**Desma Williams – Senior Biologist**  
**Arnold Nova – Fisheries Technician IV**  
**Robert Ray - Fisheries Technician III**  
**Nick McCovey – Fisheries Technician II**  
**Delray Bates - Fisheries Technician II**  
**Alan Davis - Fisheries Technician II**  
**Damian French – Fisheries Technician I**

**Approximately 13 additional technicians will be hired for monitoring the fall fishery.**

### **Klamath Division**

**Mike Belchik – Senior Fisheries Biologist**  
**Josh Strange – Fisheries Biologist II**  
**Barry McCovey Jr. – Fisheries Biologist II**  
**Jamie Holt – Fisheries Technician III**  
**Rocky Ericson – Fisheries Technician II**  
**Troy Fletcher Jr. – Fisheries Technician I**

### **Trinity Division**

**Tim Hayden, Senior Fisheries Biologist**  
**Shane Quinn, Fisheries Biologist II**  
**Aaron Martin, Fisheries Biologist II**  
**Kyle Dejuilio, Fisheries Biologist I**  
**Nathan Harris, Fisheries Biologist I**  
**Warren Peterson, Fisheries Biologist I**  
**Hank Alameda Jr., Fisheries Technician II**  
**Jeremy Alameda, Fisheries Technician II**  
**Tim Ulrich, Fisheries Technician I**  
**Larry Alameda Jr., Fisheries Technician I**  
**Albert Markussen, Fisheries Technician I**



### **Lower Klamath Division**

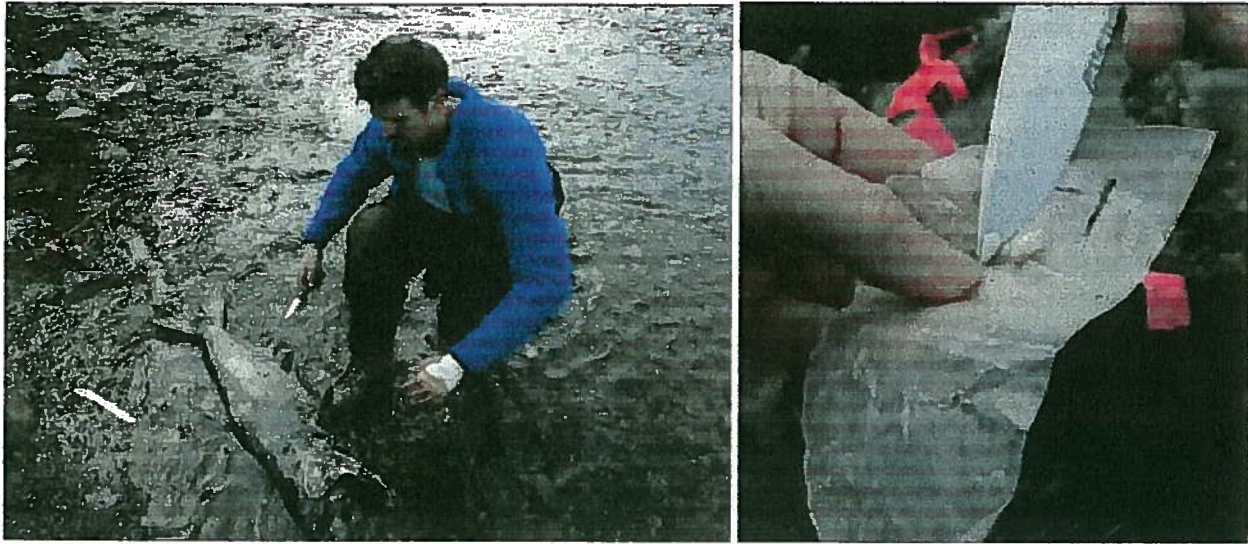
The Lower Klamath Fisheries Division (LKFD) is comprised of fisheries biologists and technicians dedicated to assessing and monitoring fisheries populations and habitats to develop and implement effective restoration projects in tributary and mainstem habitats of the Lower Klamath River. The top priority of our division is to work with other experts, stakeholders, and restoration partners to restore habitats to levels that support viable, robust fish populations. Our division continues to obtain the funding necessary to expand current fish monitoring programs and to conduct salmon habitat improvement projects in several priority tributaries.

#### ***Adult Spawning Surveys in Blue Creek***

To assess annual run size and spawning activity of chinook salmon, LKFD conducts weekly snorkel surveys throughout the Blue Creek watershed from September through December as flows allow (Figure 1). These surveys allow LKFD to assess annual escapement trends in Blue Creek and refine our knowledge of spawning timing and magnitude, redd locations, and age structure of returning chinook (Figure 2). LKFD also conducts snorkel counts of adult coho, salmon and steelhead in Blue Creek during winter - spring as flows and funding allow. These spawning surveys have been conducted annually from 1994 - 2009 and continue to provide valuable fisheries management information. LKFD is currently finalizing a report that summarizes the adult salmonid monitoring program in this critically important watershed.



Figure 1. Photographs of a school of adult chinook (left - 1996); and of an adult female chinook guarding a newly constructed redd (right – photo by Thomas Dunklin fall 2008) in Blue Creek.



**Figure 2. Andrew Antonetti collecting biological data and otoliths (ear bones) from a spent male chinook to assess the age structure of Blue Creek spawners (photos by Thomas Dunklin 2008).**

#### *Juvenile Outmigrant Trapping in Blue Creek*

Juvenile salmonid emigration is monitored with a rotary screw trap from February through September in lower Blue Creek. This provides a means of monitoring long-term production trends of juvenile chinook, coho, steelhead, and coastal cutthroat trout. In addition, this project allows for continued refinement of juvenile salmonid life history patterns within the Blue Creek watershed. This project has been conducted annually from 1995 - 2010.

#### *Salmonid Life-History Monitoring in McGarvey Creek*

A pipe trap is operated in lower McGarvey Creek between February through June to monitor long-term juvenile salmonid emigration and life history trends. This trap also provides a means of assessing population trends in response to ongoing restoration activities in the McGarvey Creek watershed. This project has been conducted annually from 1997 through 2010 (Figure 3). Crews are currently gearing up to pull the trap for the season due to low flows and no fish; and entering the 2008 data to complete a smolt outmigration report that will cover 1997 – 2008.



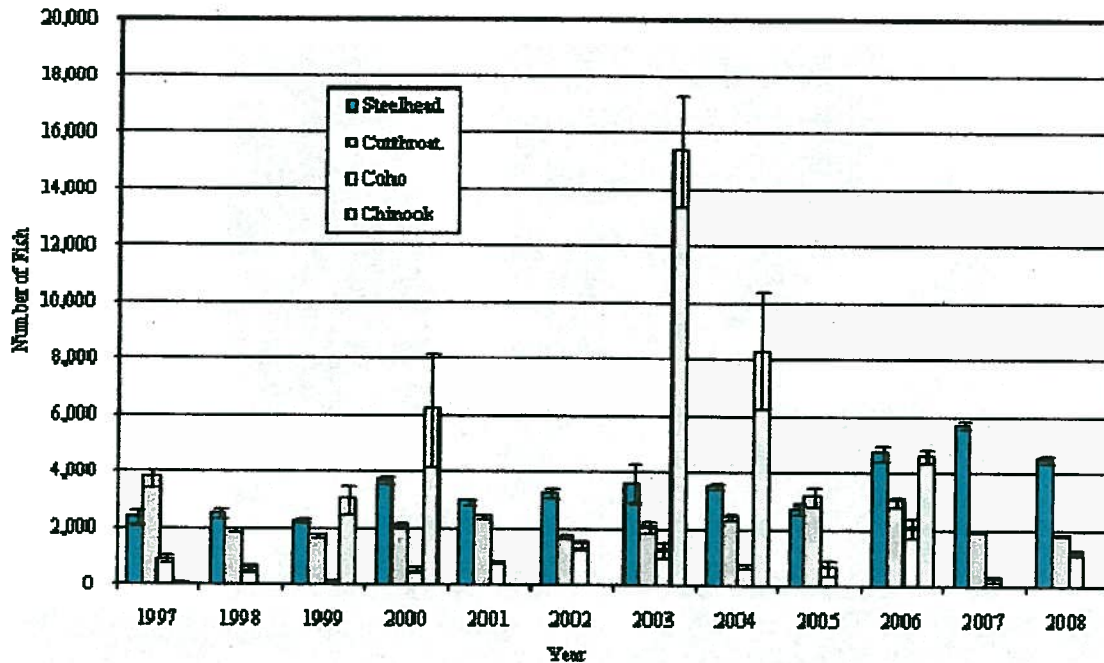


Figure 3. Estimated number of yearling and older steelhead, coastal cutthroat trout, coho salmon, and chinook salmon emigrating past the McGarvey Creek outmigrant trap, 1997 – 2008.

In addition to the annual juvenile salmonid outmigrant trapping, LKFD has also conducted annual summer abundance surveys for juvenile coho salmon and steelhead since 2002 (Figure 4). Since 2007, LKFD has also been operating various adult and juvenile traps and conducted additional fish surveys during winter through spring to enumerate anadromous salmonid populations at all life stages (adult spawning, summer rearing, and spring outmigration) and thus better assess survival rates between each life stage; and to guide restoration efforts in this priority watershed. These life-history studies revealed substantial use of McGarvey Creek by non-natal juvenile salmonids, especially during winter through spring (YTFP 2009).



Figure 4. Scott Silloway and Robert Grubbs conducting a multiple pass depletion electrofishing survey in West Fork McGarvey Creek (left); and a coho salmon smolt (right).

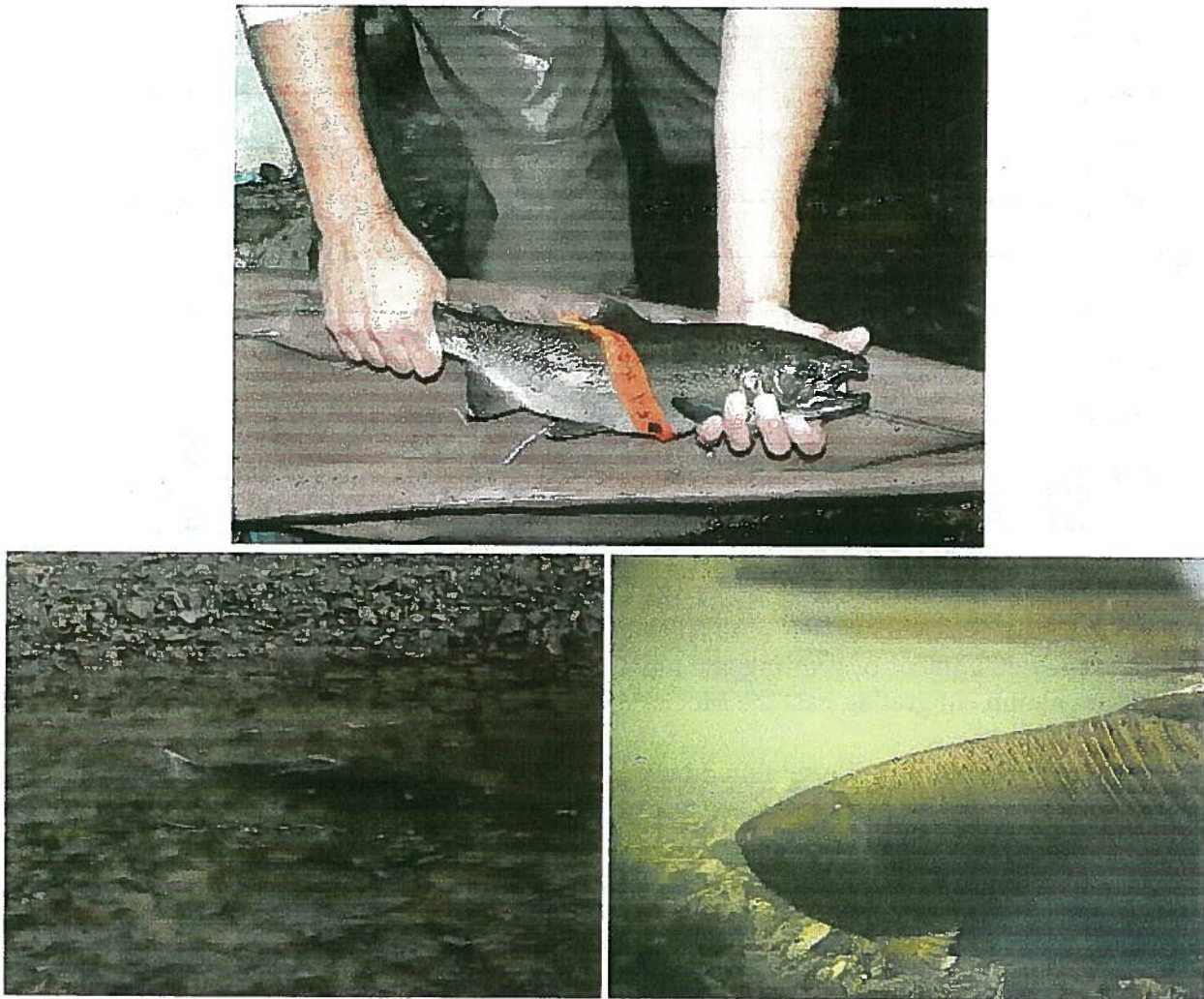


Figure 5. An adult coho captured in the McGarvey adult weir in 2008 (top); and spawning coho observed during McGarvey Creek spawning surveys (bottom – photos by Ben Laukka).

To better track salmonid populations in the watershed and in the Klamath Basin, LKFD has been implanting PIT (Passive Integrated Transponder) tags into salmonids captured during fish sampling efforts in McGarvey Creek and in other Lower Klamath habitats. PIT tags are tiny capsules electronically coded with a unique identification number that can be detected by hand-held scanners (Figure 6) and/or stream width antenna stations. LKFD recently received funding from both the California Department of Fish and Game and the U.S. Bureau of Reclamation (BOR) to continue and expand salmonid monitoring efforts in this watershed. As part of these efforts, LKFD will be installing multiple PIT tag monitoring stations in McGarvey Creek to increase our ability to recapture PIT tagged fish and document natal and non-natal use by juvenile coho. LKFD has been operating a series of. Recapture information collected at these stations improves our understanding of salmonid migration, residency, survival, and diverse life history strategies.



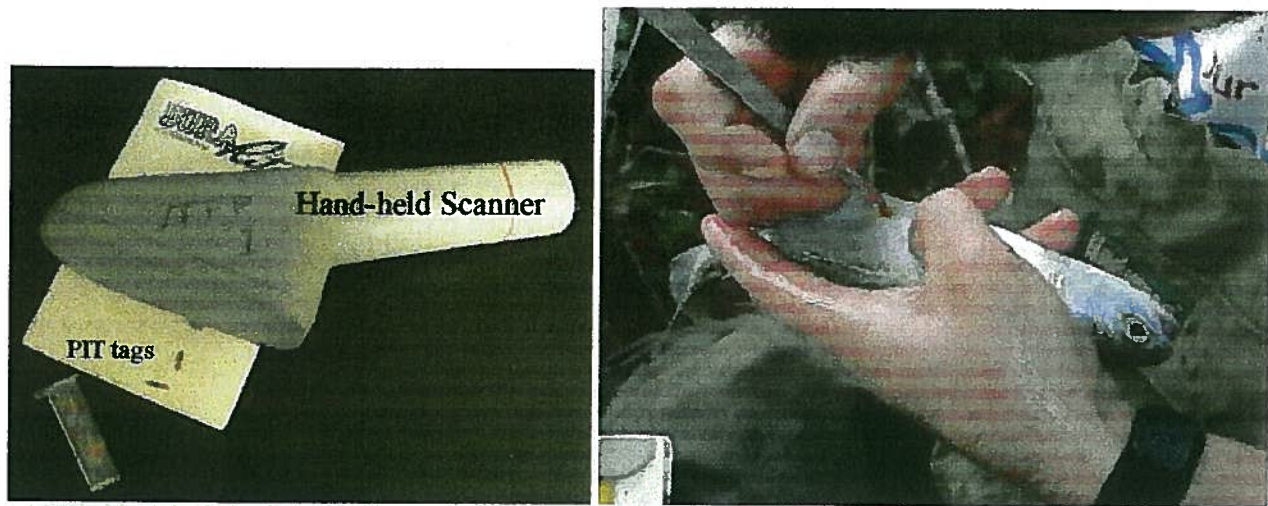


Figure 6. PIT tags and hand-held scanner (left); and Scott Gibson performing the necessary incision to implant a PIT tag into a juvenile steelhead (right).

### *Coho Salmon Ecology Project*

Since 2007, LKFD has been coordinating with the Karuk Tribe and other partners to conduct the Coho Salmon Ecology Project. This project is funded by BOR to assess and monitor juvenile coho habitat use, movement, growth, and distribution throughout the Klamath River (Soto et al. 2008; Hillemeier et al. 2010). LKFD has mainly focused on monitoring off-estuary tributary, wetland, and slough habitats including the South Slough of the estuary, Waukell Creek, Salt Creek, McGarvey Creek, Panther Creek, Richardson Creek, and Spruce Creek (Figure 7). Objectives include documenting fish use and timing as well as tracking upstream and downstream fish movement in the tributary reaches. This project has relied heavily on the use of PIT tags and mark-recapture techniques to assess migration patterns, habitat use, growth, survival, and residency. Since 2007, the Yurok and Karuk Tribes have implanted thousands of juvenile coho with PIT tags in habitats located throughout the Mid- and Lower Klamath.

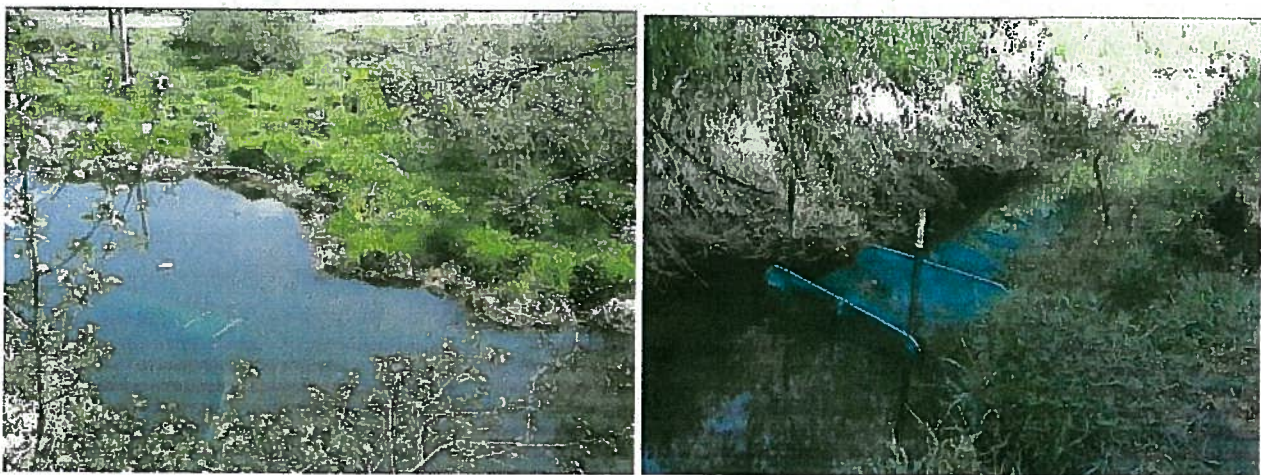


Figure 7. Fyke nets deployed in Panther Pond (left) and Waukell Creek (right) to document fish migration, growth, survival as part of the ongoing Coho Salmon Ecology Project.

During December 2008, LKFD worked with Biomark to install remote PIT tag monitoring stations in Waukell, Salt, and Panther Creeks to detect PIT tagged fish and record detection time, tag number, and directional movement (Figure 8). The stations are solar powered, but require crews to charge batteries bi-weekly during winter months. The stations have been functioning since December 2008 with few interruptions and have provided critical recapture data including coho marked by the Karuk Tribe in the Mid-Klamath (i.e. travel distances of 127 river miles).

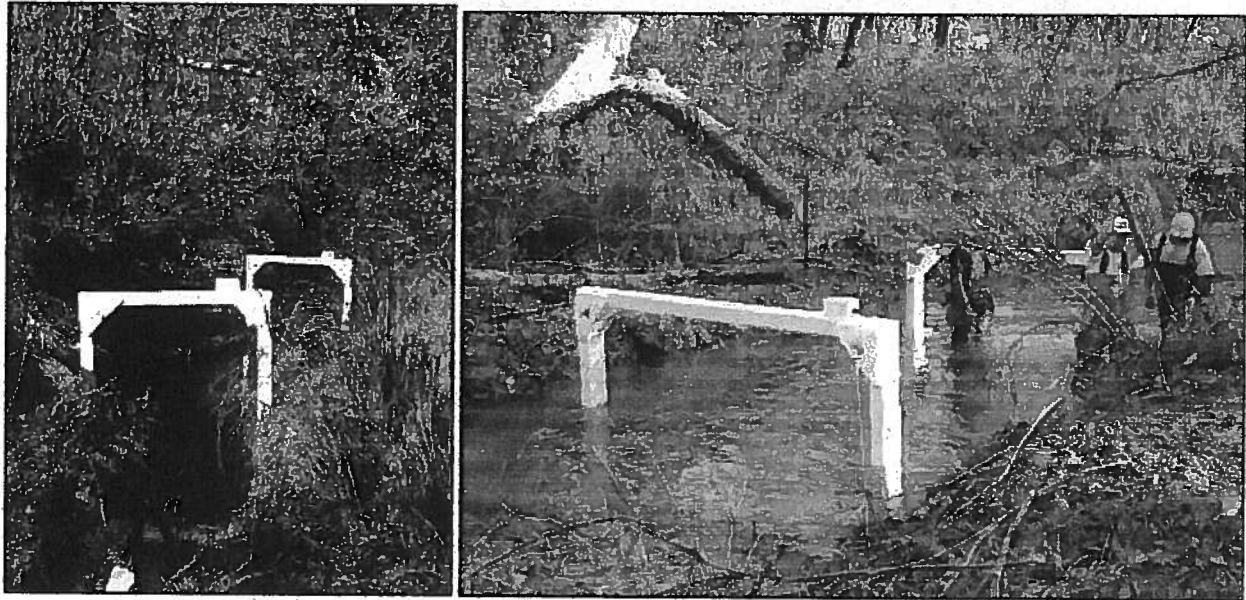


Figure 8. PIT tag monitoring stations in Panther Creek (left) and lower Waukell Creek (right).

In April 2010, LKFD received funding from the National Oceanic and Atmospheric Administration (NOAA) to establish two remote PIT tag monitoring stations on Terwer Creek. LKFD is currently working with NOAA to implement a large-scale American Recovery and Reinvestment Act (ARRA) restoration project in Terwer Creek. The PIT tag stations were constructed, with help from U.S. Geological Survey staff from the Klamath Falls Division, in two existing off-channel habitats in lower Terwer Creek. These remote stations will greatly increase our ability to document use of these off-channel habitats by natal and non-natal juvenile coho salmon; and to assess juvenile residency time, growth rates, and stranding. The stations were operated in conjunction with mark-recapture surveys during winter-spring 2010 to document fish use in the two existing off-channel habitats prior to implementing wetland enhancement activities in summer 2010. Once the ponds are constructed, the PIT tag stations will be re-constructed to prepare for the first monitoring season following restoration.

#### *Stream Habitat Restoration*

During summer 2009, LKFD continued wood loading activities in the McGarvey Creek watershed with our restoration specialist Rocco Fiori (Licensed California Geologist, Fiori GeoSciences (FGS)). LKFD and FGS constructed ~13 complex wood jams (CWJs) in stream and floodplain habitats located downstream of West Fork McGarvey (Figures 9-10). Objectives



of these efforts include immediately improving conditions for fish by facilitating the geomorphic processes that result in the formation and maintenance of critical habitats (i.e. pools and spawning beds) and to help promote riparian health. These restoration efforts also provide high quality and diverse job training opportunities for Yurok Tribal member staff (Figure 11). We also received funding to implement the first few phases of a comprehensive restoration plan for lower McGarvey Creek. The first few phases will focus on creation and enhancement of floodplain and off-channel habitats to increase the quality and quantity of rearing habitat available for natal and non-natal salmonid populations, especially ESA listed Klamath coho salmon. We are planning to construct the first alcove channel in summer 2010.



Figure 9. Photographs of the 2009 Site 5 prior to wood loading activities (Top – Summer 2009) and following construction of the wood jam (Bottom – Fall 2009).





Figure 10. Photographs of the 2009 Site 5 prior to wood loading activities (Top – Summer 2009) and following construction of the wood jam (Bottom – Fall 2009).

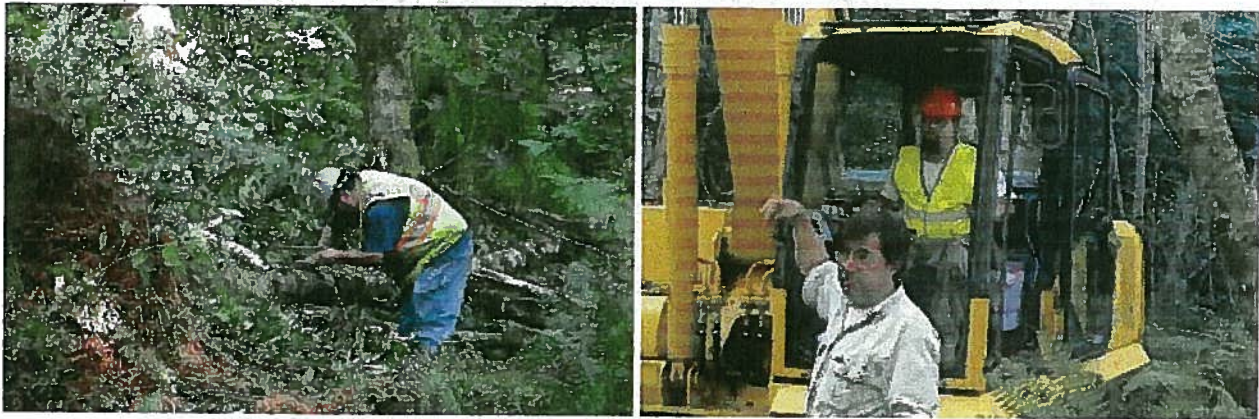


Figure 11. Steven Nova (Left – Summer 2008) and Aldaron McCovey assisting Rocco Fiori (Right – Summer 2007) with wood loading activities in the McGarvey Creek watershed.

In summer 2009, LKFD and FGS also constructed 13 CWJs in upper Waukell Creek to immediately improve spawning and rearing habitat for natal and non-natal salmonid populations; and promote the development and maintenance of complex and resilient stream and riparian habitats (Figure 12). In spring 2010, crews planted 2,550 native redwoods in the reach located directly upstream of the CWJs to promote future wood recruitment to this reach (Figure 13).





**Figure 12.** Photographs of complex wood jams constructed in Waukell Creek in summer 2009 and the numbered ID tags surveyed to document any movement of wood over time.



**Figure 13.** Redwood saplings recently planted in riparian habitats of Waukell Creek.

LKFD continued implementing riparian and stream restoration project tasks in lower Terwer Creek. Funding to complete these efforts was secured through grants from U.S. Bureau of Indian Affairs (BIA), the U.S. Fish and Wildlife Service (USFWS), and NOAA's ARRA Program. Restoration techniques implemented included construction of willow siltation baffles, log-boulder structures, and engineered log jams (ELJs) to reduce bank erosion rates, protect riparian

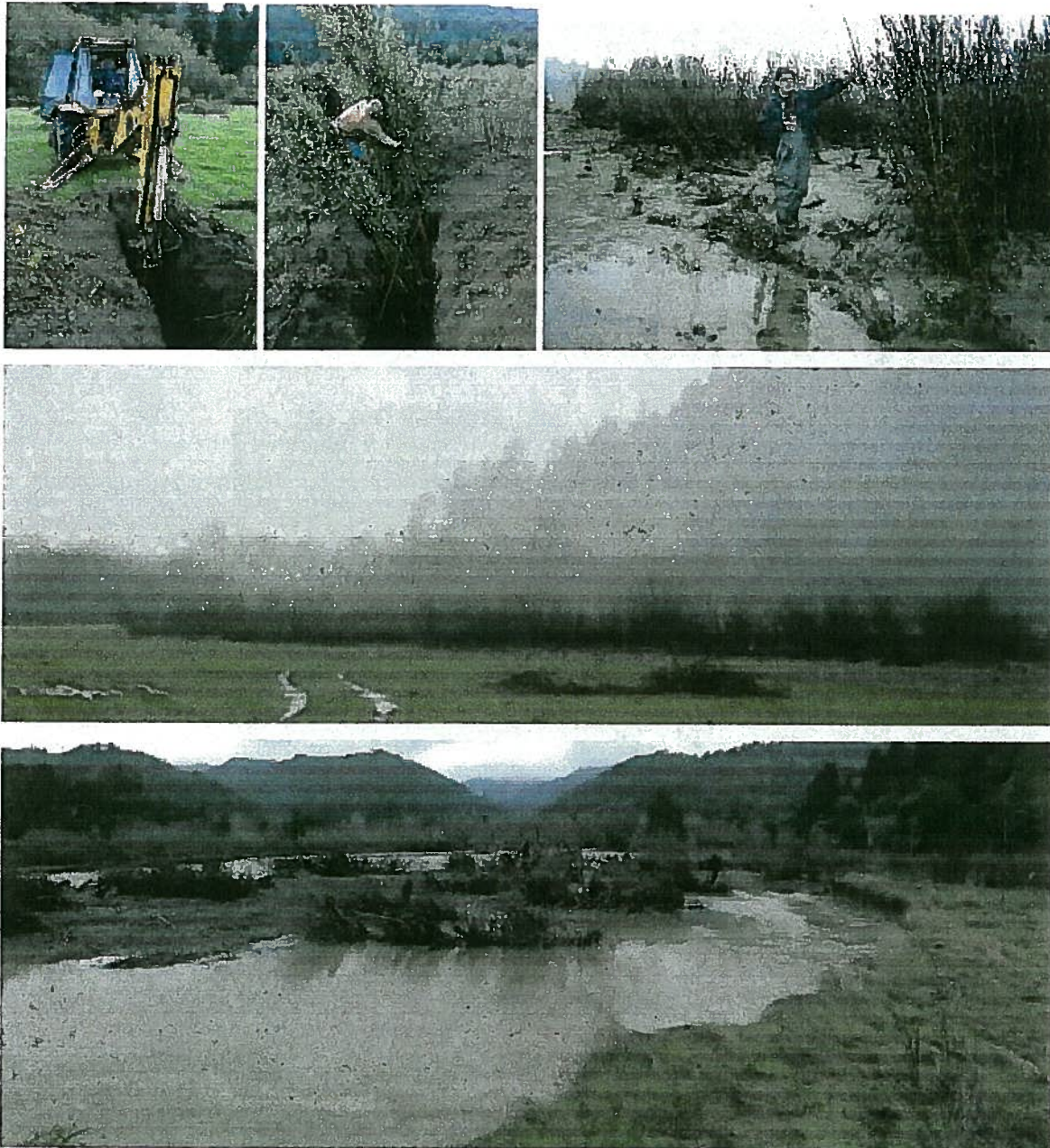
habitats, and immediately improve conditions for native fish populations (Figures 14-15). In spring 2010, LKFD completed a restoration report for USFWS Tribal Landowner Incentive Program. The report documented restoration and monitoring activities in lower Terwer Creek from 2007 – 2009 (YTTP 2010). Starting in July 2010, LKFD and FGS will enhance two existing off-channel ponds in lower Terwer Creek and construct associated willow baffles and ELJs to continue improving stream and riparian habitats in this priority watershed.

#### *Native Tree Nursery and Riparian Restoration*

Crews have continued operation of the Yurok Tribal Native Plant Nursery at the Lower Klamath Fisheries office in Klamath. Yurok Tribal staff are trained in seed and cutting collection, germination and propagation, and tree growing and planting. LKFD grows several thousand native deciduous and conifer trees for use in our stream restoration projects. Species cultivated and grown to date include coastal redwood, Douglas fir, Sitka spruce, western red cedar, Port Orford cedar, big-leaf maple, red alder, black cottonwood, tanoak, white oak, and bay laurel. LKFD worked with a local contractor to construct a green house facility at the nursery as part of the NOAA ARRA project and a grant from the U.S. Department of Agriculture (Figure X).

Crews have been conducting extensive riparian planting throughout high priority Lower Klamath River tributaries since the late 1990s. Plantings have consisted of native conifers and deciduous saplings to facilitate our long-term goal of reestablishing mature, resilient riparian forests. In winter 2009-2010, LKFD planted over 9,000 native conifers in riparian habitats of McGarvey Creek upstream of wood loading activities; 27,832 conifers and 283 deciduous trees in riparian habitats of Terwer Creek; 15,889 conifers in riparian habitats Hunter Creek; and 2,550 conifers in riparian habitats of Waukell Creek (Figure 13). Riparian planting activities will continue in Hunter and Terwer Creeks during winter 2010-2011.



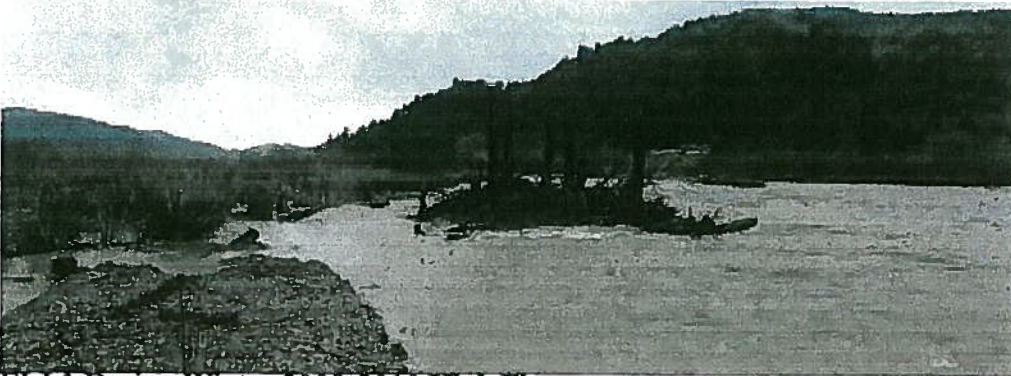


**Figure 14. Photographs of willow baffle construction (Top Left – winter 2009) and following construction and high flow events (Top Right and Middle and Bottom).**





**ELJ 1 Post Construction**



**ELJ 1 During Winter 2009-2010 High Flows**



**ELJ 2 During  
Construction (Above)  
and During a High Flow  
Event (Bottom Left)**

**Figure 15. Photographs of engineered log jams constructed in Terwer Creek in 2009.**



### *Restoration Planning and Effectiveness Monitoring*

Since 2002, LKFD has been conducting watershed assessments and planning restoration in off-estuary habitats of the Klamath River (Beesley and Fiori 2004, 2007, and 2008). During the past year LKFD continued obtaining the necessary physical and biological data to develop a large-scale, process-based restoration plan for the Klamath River estuary; and developing conceptual designs and permitting strategies for the area. As part of these efforts, LKFD partnered with GDRC to obtain high resolution LiDar for the Yurok Tribe Reservation lands. We have also been coordinating with YTEP to integrate their coastal wetland assessment program (Patterson 2009) into the estuary restoration planning effort. LKFD is currently seeking the funding necessary to complete the restoration plan for the Klamath River estuary.

LKFD has been working with several resource agencies and stakeholders to develop restoration strategies for Waukell Creek based on the non-natal salmonid use of this watershed that has documented over the last few years (Soo et al. 2008; Hillemeier et al. 2009). Priority restoration objectives include 1) improving hydrologic and geomorphic function to ensure protection of critical downstream habitats (i.e. estuary); 2) increasing juvenile salmonid rearing capacity and productivity; and 3) enhancing adult salmonid staging and spawning habitats. Restoration activities will include constructing CWJs in channel and floodplain habitats; enhancing existing wetlands and creating new, complex off-channel habitats; removing invasive plants and reestablishing native riparian species; and replacing poorly functioning culverts.

LKFD developed several restoration grants to various resource agencies to conduct more stream and off-channel enhancement projects in McGarvey and Hunter Creeks; and to monitor salmonid populations in McGarvey Creek and the Lower Klamath. We also continued working with Yurok Forestry and Watershed Departments, GDRC, various resource agencies, and state-level policy makers to establish a workable protocol for obtaining quality wood sources for salmonid restoration projects in the Klamath Basin and throughout California. Survival of California coho depends heavily on resource stakeholder's ability to build and restore off-estuary rearing habitats; and loading these and other tributary habitats with large amounts of high quality wood (i.e. large whole trees and smaller material to incorporate into complex jams). Developing a sound mechanism for generating wood for instream enhancement projects is critically important to LKFD and the fisheries resources of the Yurok People.

Crews continued topographic surveys in several priority watersheds to document baseline and post-restoration conditions to assess restoration effectiveness and to guide future efforts (Figure 16). LKFD is dedicated to assessing the effectiveness of restoration activities in the Lower Klamath River to learn from past projects, adapt restoration activities to better address limiting factors, and provide models for other salmonid restoration practitioners. LKFD recently completed topographic surveys in East Fork Hunter, McGarvey and Terwer Creeks to document baseline conditions prior to implementing stream enhancement projects this summer.

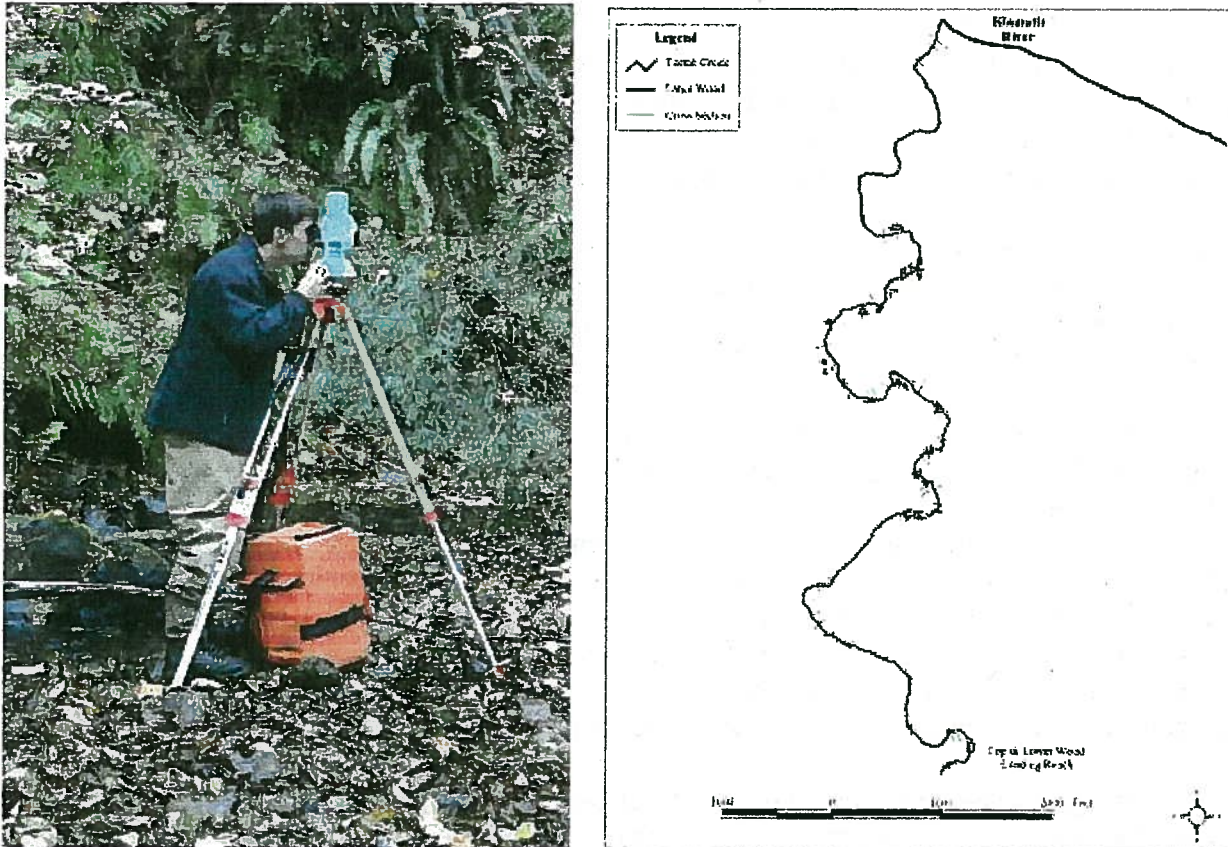


Figure 16. AJ Webster surveying McGarvey Creek and the large wood placement sites (left); and a map generated from survey data in Tectah Creek (right).

#### *CalTrans Coordination on the Proposed Klamath Grade Raise Project*

LKFD continued coordinating with the California Department of Transportation (Caltrans) regarding their proposed Klamath Grade Raise (KGR) scheduled for 2011. The KGR has the potential to impact several key drainages and off-estuary wetlands critical for natal and non-natal salmonids and other Tribal Trust wildlife. Other Tribal Departments involved in this process include Yurok Tribe Environmental Program (YTEP), Yurok Legal Department, and Yurok Planning and Development Department, as well as Executive staff and Council. These Tribal departments have been meeting regularly to provide comments on potential design and construction scenarios and to inform CalTrans regarding the resources at risk. As part of these efforts, LKFD recently completed a fisheries related study in the KGR project area to begin documenting use of the project area by ESA listed coho salmon (Silloway 2010). This summer we began a second study to further document juvenile coho use in Panther Creek pond and in Spruce Creek; and to further characterize fish habitat in Panther Creek pond (Figure 7).

#### *Fish Health Monitoring*

We have been an active member of the Klamath Fish Health Assessment Team (KFHAT), which is geared towards preventing fish kills in the basin and serves as an emergency response team in the event of future fish kills. We have also coordinated with the U.S. Fish and Wildlife Service

(USFWS) to conduct disease monitoring of emigrating juvenile chinook downstream of Blue Creek. We are currently coordinating with upriver staff to conduct the 2010 sampling effort.

### *Water Temperature Monitoring*

Water temperature is monitored annually in several priority Lower Klamath tributaries including: Hunter, Terwer, McGarvey, Blue, Ah Pah, and Tectah Creeks. Tributary water temperature monitoring was initiated in 1995. Due to the influence of stream temperatures on salmonid growth and survival, LKFD plans to maintain this long-term data set as funding allows.

### *Presentations, Conferences, and Trainings*

In spring 2010, Sarah Beesley assisted Rocco Fiori (FGS) develop professional presentations that highlighted recent watershed restoration activities conducted by FGS in the Klamath Basin and Smith River; and that stressed the importance of these activities for the survival of Klamath Basin and other north coast populations of coho salmon. Fiori presented his work with LKFD on the Lower Klamath at the Klamath Basin Science Conference held in Medford last spring.

In March 2010, LKFD staff (Dave Weskamp, Gilberto Calleja, Aldaron McCovey, Delmer Jordan, and Sarah Beesley) attended the first annual joint California-Nevada Chapter of the American Fisheries Society and the Salmonid Restoration Federation conference held in Redding in March 2010. Sarah Beesley coordinated with Rocco Fiori (FGS) on a presentation regarding wood loading techniques and the importance of these projects to the survival of California salmonids, especially coho. FGS presented several case studies including the wood loading projects implemented in Terwer, McGarvey, and Tectah Creeks and also received the "Golden Pipe" for his innovative work in salmonid restoration from the Salmonid Restoration Federation.

### *Reports and Presentations Completed*

Fiori, R.A., S. Beesley, D. Weskamp, D. Hillemeier, J. Beneger, S. Nova, and T.B. Dunklin. 2010. Valley and Stream Habitat Restoration in the Lower Klamath Sub-Basin. Klamath Basin Science Conference. February 4<sup>th</sup>, 2010. Medford, Oregon.

Fiori, R.A. and S. Beesley. 2010. Mega Wood Loading Projects for Coho Recovery: How Do We Get There? Examples from North Coastal California. Salmonid Restoration Federation and American Fisheries Society Cal/Neva Joint Conference. March 13<sup>th</sup>, 2010. Redding, California.

Hillemeier, D., T. Soto, S. Silloway, A. Corum, M. Kleeman, and L. Lestelle. 2009. The Role of the Klamath River Mainstem Corridor in the Life History and Performance of Juvenile Coho Salmon (*Oncorhynchus kisutch*) - Year 2 Report May 2007 – May 2008. Report to the U.S. Bureau of Reclamation, Klamath Area Office, Klamath Falls, Oregon.

Silloway, S. 2010. Fish Surveys Related to the Proposed Del Norte Highway 101 Klamath Grade Raise Project. Yurok Tribal Fisheries Program, Klamath, California.

Yurok Tribal Fisheries Program. 2010. Lower Terwer Creek Streambank and Riparian Restoration - U.S. Fish and Wildlife Service – Tribal Landowner Incentive Program Project. Yurok Tribal Fisheries Program, Klamath, California.

Yurok Tribal Fisheries Program. 2010. Lower Terwer Creek Farley Property Cattle Exclusion Fencing Project. Yurok Tribal Fisheries Program, Klamath, California.

## **YTFP Klamath River Division**

### *Green Sturgeon Telemetry*

In 2009 we were able to capture and acoustically tag 4 green sturgeon in the Klamath River; in 2010 we were able to tag 20 green sturgeon. The acoustic tags we used were surgically implanted and have a ten year lifespan. These tags will allow us to record in-river movements of the sturgeon, as well as document how often these fish return to the Klamath River. Other researchers may also detect our tagged sturgeon as they migrate throughout the bays and estuaries of the Pacific Northwest. We started fishing in March and finished up in June. The largest fish we tagged was 7'4" and weighed 170 lbs.

In 2009 and 2010, we once again deployed our in-river array of acoustic receivers to detect and monitor the movements of tagged sturgeon. These receivers detect any sturgeon that we tagged in 2009 or 2010 and also pick up any sturgeon tagged in other locations (if their tags were still operational). We deployed seven receivers in the river and two more in the ocean just off the Klamath River mouth. Receiver locations in the river ranged from the estuary to the Salmon River.

A short report on our 2009 findings can be found at the Yurok Tribal Fisheries Program's Website (<http://www.yuroktribe.org/departments/fisheries/FisheriesHome.htm>).





**Figure 1: Rocky Erickson and Barry McCovey loading a tagged sturgeon prior to its release during the 2010 green sturgeon tagging project.**



**Figure 2: Barry McCovey and Rocky Erickson setting a gill net to capture green sturgeon during the 2010 tagging project.**

### *Water Temperature Monitoring*

In March of 2010 we deployed 12 water temperature monitors at various sites throughout the Klamath River Basin. These monitors are located from Iron Gate Dam to the estuary, including the Trinity, Salmon, Scott, and Shasta Rivers. These monitors record river temperatures every hour until we remove them when the high flows of winter arrive. The data collected during this study is forwarded to our funding agency and entered into our water temperature database, which dates back over ten years.

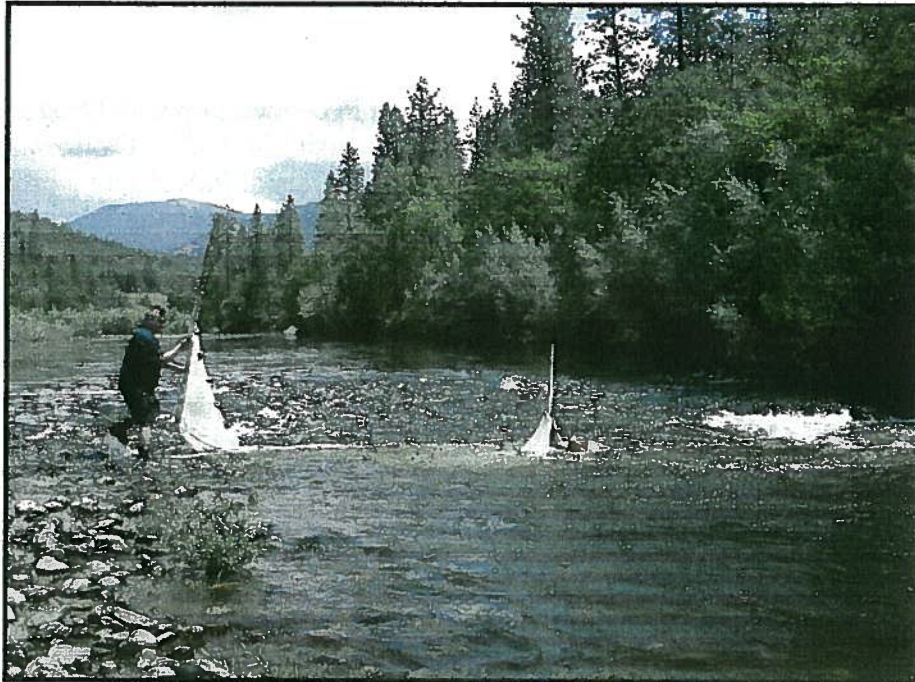
### *C. shasta QPCR water sampling*

In the spring of 2010 we began to sample Klamath River near Tulley Creek for the presence of *C. shasta* spores. The fish disease *C. shasta* is a serious problem on the Klamath River, and kills a substantial portion of juvenile salmonids every year. Water samples are collected once a week throughout the entire year. The water samples are filtered in our lab and the filtered out material was sent to a lab at Oregon State University where it is tested for the presence and quantity of *C. shasta* DNA.

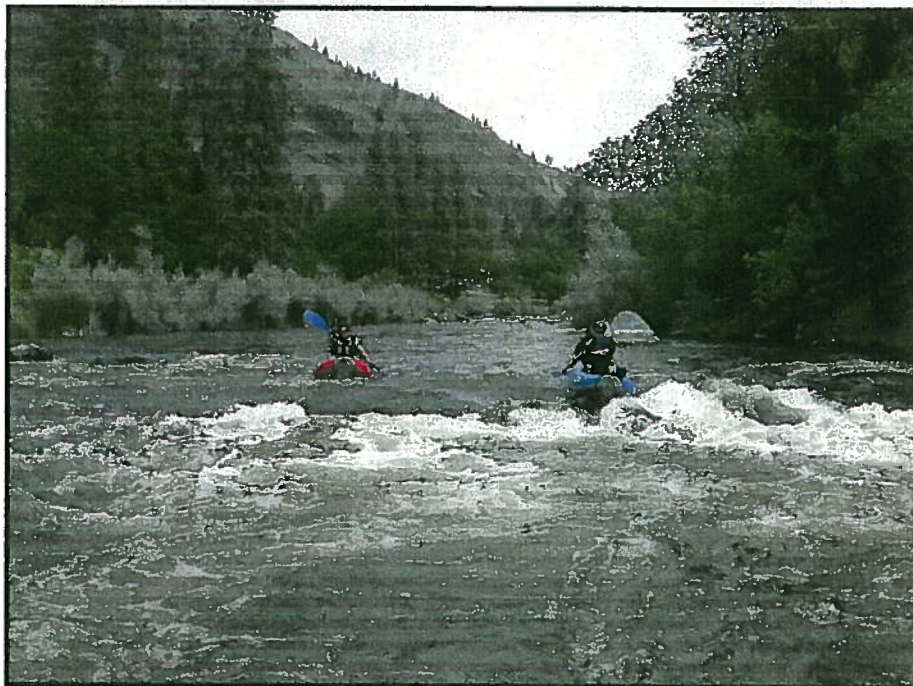
### *Klamath River Juvenile Fish Health*

In 2010 the YTFP Klamath River Division assisted the U.S. Fish and Wildlife Service's California/Nevada Fish Health Center in a study on the prevalence of the fish diseases *C. Shasta* and parvocapsula in Juvenile Chinook salmon. These diseases infect a high percentage of juvenile Chinook as they migrate to the sea. We provided one of five crews that were working throughout the Klamath Basin on this project. We used a seine net to capture juvenile Chinook of hatchery origin. These fish were collected and sent to a lab in Anderson where they were analyzed for disease. We worked in the Shasta River to Scott River area at the beginning of the study, and slowly followed the fish downstream as they migrated to the sea. This project began in May and ended in mid-July. All data collected was forwarded to the USFWS Cal/Neva Fish Health Center.





**Figure 3: Rocky Erickson and Troy Fletcher using a seine net to capture juvenile Chinook salmon.**



**Figure 4: Jamie Holt and Rocky Erickson using inflatable kayaks to float a section of the Klamath River during the juvenile fish health project.**

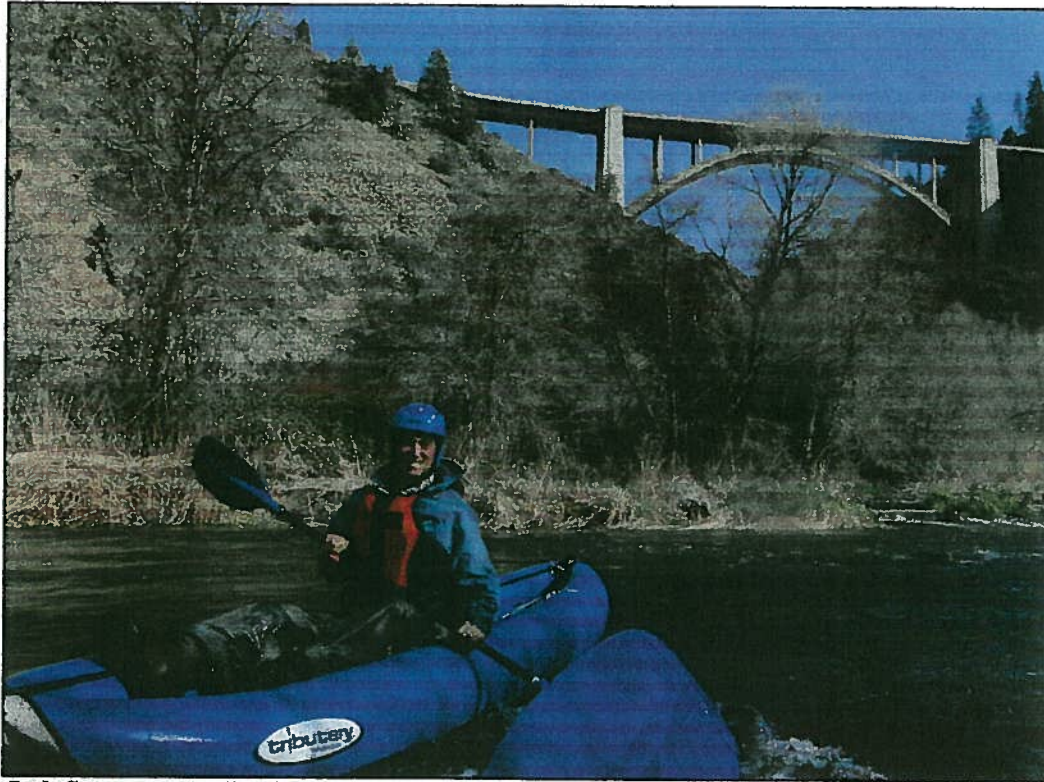
### *Polychaete Worm Investigations*

This project was initiated in 2010 and is being conducted in cooperation with Oregon State University in Corvallis, Oregon, and Humboldt State University in Arcata, California. We are attempting to study the prevalence, location, and infection levels of Polychaete worms at various locations in the Klamath River between the Shasta River confluence and the Scott River confluence. Polychaete worms are a critical element in the life history of the fish disease *C. shasta*. The disease uses the worms as a secondary host (secondary to salmonids), and it cannot survive without them (the worms). We believe that the abundance of worms in the river could be correlated to the number of juvenile salmon that are infected with the disease. We are currently developing a state of the art prototype suction device that will allow us to collect large numbers of worms to study. This project is presently in the research and development stage, we hope to begin collecting worms in the near future. Once we have established our methods, we will be collecting polychaetes once a month, from various locations, for a one year time period. As an offshoot of this project, we also conducted our own small scale study in the Shasta River to evaluate the presence/absence of Polychaete worms. We conducted a floating survey of the lower twenty miles of the Shasta River, and did not find any worms.



**Figure 5: Rocky Erickson using a suction device to collect Polychaete worms in the Klamath River.**

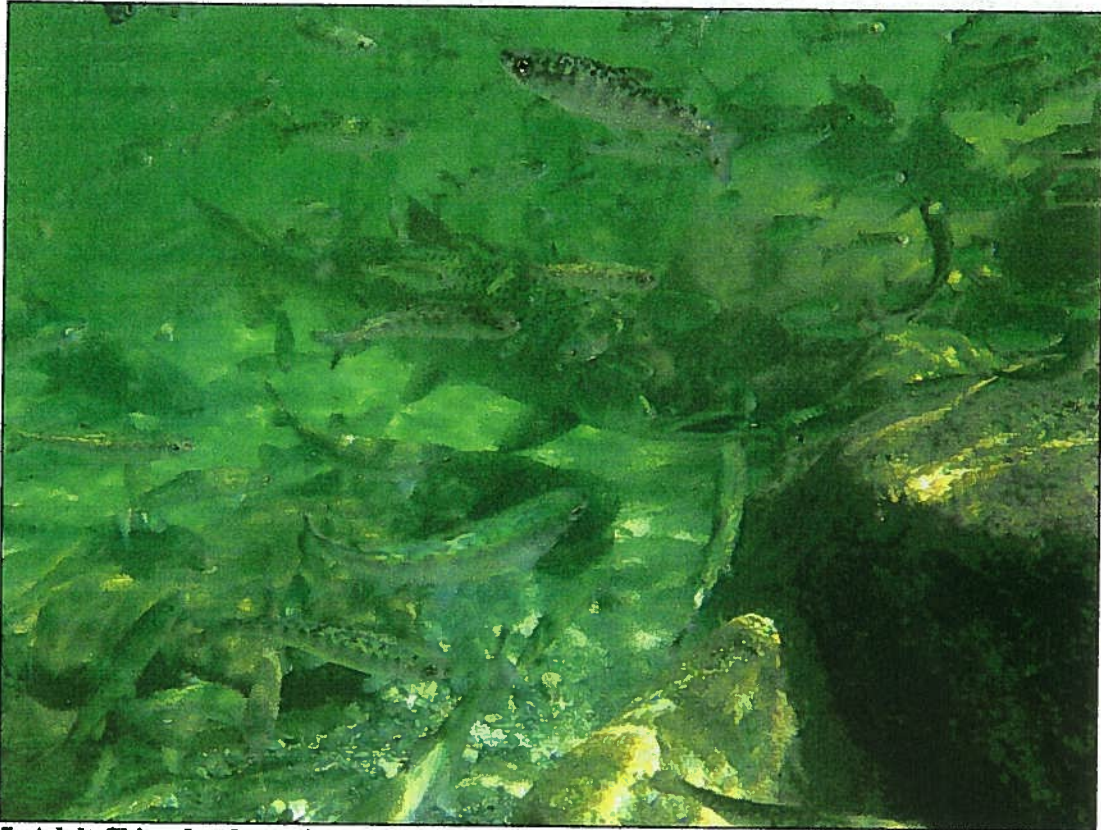




**Figure 6: Josh Strange sampling in the Shasta River looking for Polychaete worms**

### *Thermal Refugia Dives*

2010 marks the ninth consecutive season that we are conducting our thermal refugia observation project. In the summer months, river temperatures can become elevated to a point that may be lethal to salmonids. When river temperatures reach these critical levels, salmonids will seek refuge in the cooler water that is found at the mouths of tributaries. We snorkel these areas to get an idea of how many fish are using them; we also evaluate the overall health of the fish we observe. We have four sites that we focus our efforts on each year, they are: Cappell Creek, Tully Creek, Bluff Creek, and Red Cap Creek. We began these surveys in July which is later than normal. This was due to the cooler than average river temperatures that were present in the early summer of 2010. This project is ongoing and will finish up at the end of August.



**Figure 7: Adult Chinook salmon, juvenile Chinook salmon, juvenile steelhead, and suckers using the thermal refugia created by Bluff Creek during the summer of 2009.**

### *Adult Chinook Disease Sampling*

This 2009 study entailed capturing Chinook salmon at Weitchpec and examining their gills under a microscope for diseases. We have been conducting this project for seven years in cooperation with the YTFP Trinity River Division. We initiated this project in response to the 2002 Klamath River Fish Kill in which 68,000 salmon perished. This study allows us to monitor the levels of disease in adult Chinook as they migrate to their spawning grounds. We were looking for Ich (*Ichthyophthirius multifiliis*), and Columnaris (*Flavobacterium columnare*) which were the two fish diseases responsible for the 2002 fish kill. Preliminary results showed very few cases of Columnaris and no Ich. Over 200 adult Chinook were sampled, all of these fish were donated to elders and those in need. We plan to conduct this study again in 2010; we will begin in mid August. A detailed report on our 2009 findings can be found on our website (<http://www.yuroktribe.org/departments/fisheries/FisheriesHome.htm>).

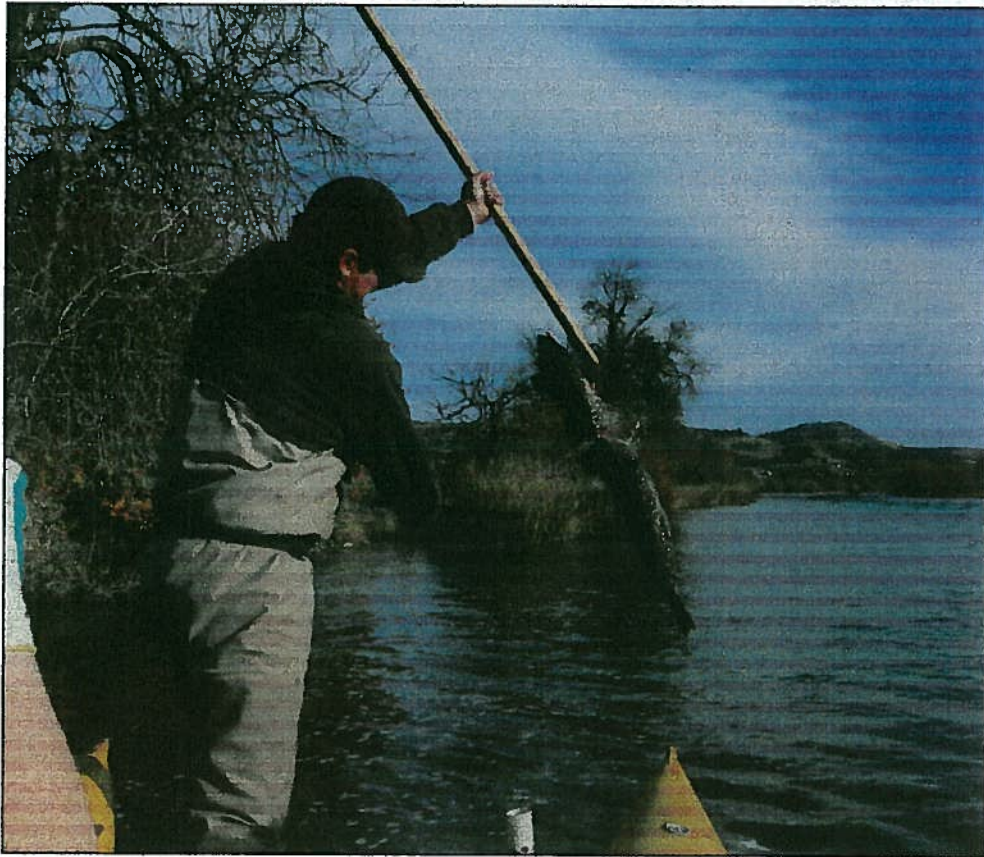




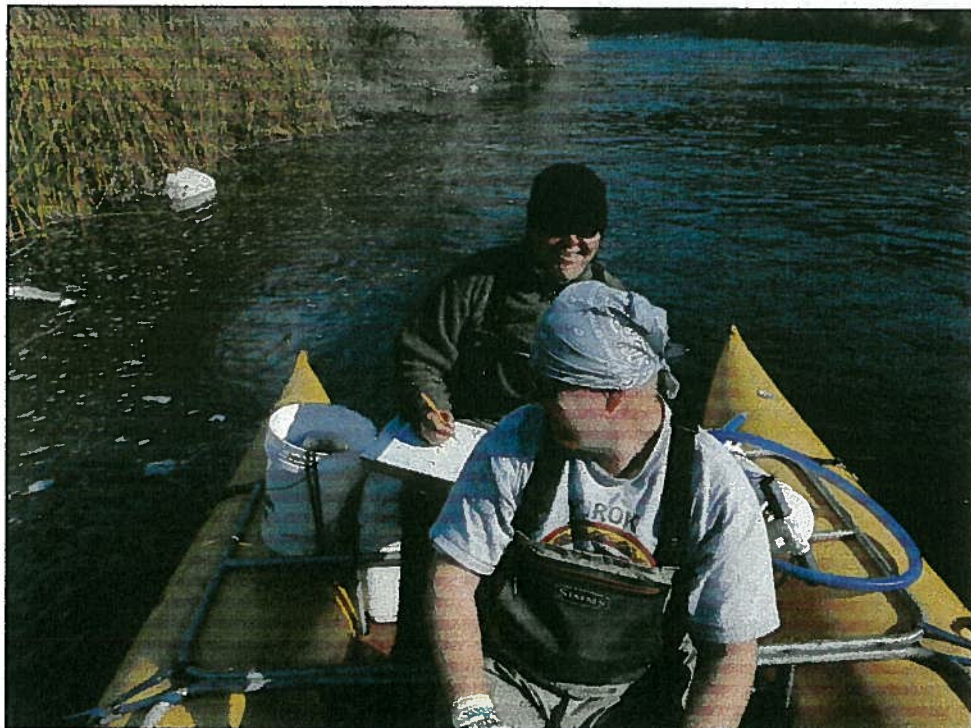
**Figure 8: A Chinook salmon splashes in a drifting gill net during our 2009 adult fish health project.**

### *Upper Klamath River Carcass Survey*

Our annual collaboration in the Klamath River mainstem spawner abundance surveys started on October 14<sup>th</sup> of 2009 in the vicinity of Iron Gate Dam. This project is extremely important in determining the size of future salmon runs. Our three person crew worked in collaboration with the US Fish and Wildlife Service. They floated different sections of the river on a weekly basis enumerating salmon carcasses, as well recording biological data. This project continued until early December. We will be continuing this project in October of 2010.



**Figure 9: Josh Lewis chopping a Chinook salmon carcass on the upper Klamath River in 2009.**



**Figure 10: Jamie Holt and Rocky Erickson conducting upper Klamath River Carcass Survey in 2009.**

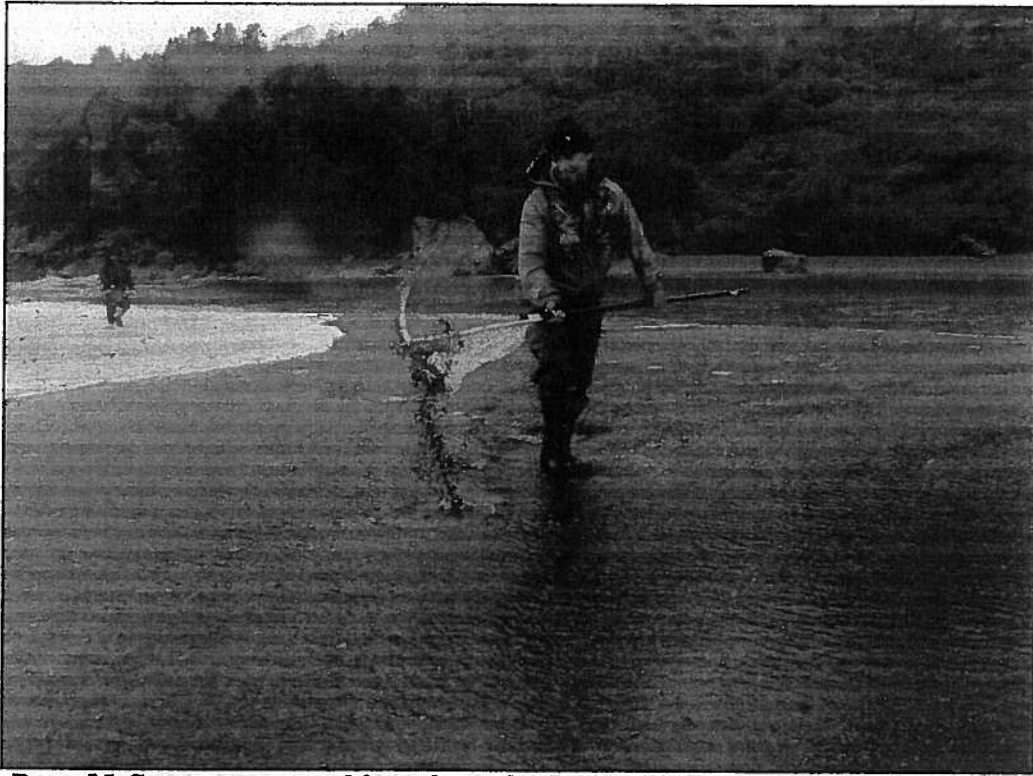


### *Pacific Lamprey Radio Telemetry*

This is a new project that we began in the spring of 2010. Very little is known about the spawning migration of Pacific lamprey in the Klamath River. In order to fill some of the gaps in our knowledge concerning eels, we initiated a radio telemetry study to track tagged lamprey as they migrated up the river. We began capturing eels at the mouth of the Klamath River in March using dip nets. The captured eels were anesthetized and had a small radio tag surgically implanted into their abdominal cavity. These tags have a lifespan of over one year which will allow us to track the lamprey throughout the duration of their spawning migration. In other rivers eels have been observed spending up to a year in freshwater before spawning. One of the main goals of this study is to find out if Klamath River eels are doing the same thing. If our eels are in fact spending long periods of time in the river, they are being exposed to a host of water quality and water quantity issues. We were able to capture and tag 24 Pacific lamprey in the spring of 2010. We set up six monitoring stations to record when particular eels passed by. We also manually tracked by jet boat and road. As of July 30<sup>th</sup> we have detected 17 tagged eels from Tully Creek to Happy Camp on the Klamath, and as far as Junction City on the Trinity River. We plan to continue this study into 2011, or as long as it takes for our tagged eels to spawn and die.



**Figure 11: Captured Pacific lamprey recover after having radio tags implanted into to their abdominal cavity.**



**Figure 12: Barry McCovey scoops an eel from the surf as Rocky Erickson looks on.**

## Trinity River Fisheries Division



### *Trinity River Restoration Program Participation*

The mission of the Yurok Tribal Fisheries Program, Trinity River Fisheries Division (TRFD) is to ensure the protection of Yurok Tribal fishing and water rights through restoration of natural populations of tribal trust fish species of the Klamath and Trinity River. The Yurok Tribe is an active partner in the Trinity River Restoration Program (TRRP). As a partner, the Yurok Tribe participates on both policy and technical levels to best implement the 2000 Record of Decision (ROD). The TRRP is guided by the 8 member Trinity River Management Council (TMC). The Yurok Tribe is a member of the TMC and works with other TMC members to develop the policy guidance to direct the restoration actions of the TRRP. The Trinity River Division works cooperatively with the TRRP staff and other TRRP partners to implement and evaluate restoration actions such as ROD flow releases, channel rehabilitation and coarse sediment augmentation efforts.

### *Trinity River Restoration Program: FY 2011 Science Proposal Process and TRRP Workplan*

The Trinity River Flow Evaluation Study (TRFES) described the impacts of the Trinity and Lewiston Dam construction and operations and the strategy for restoring the Trinity River and its anadromous fish populations. The Integrated Assessment Plan v1.0 (IAP) was completed by the TRRP partners, including the Yurok Tribe, in 2009. The IAP is an integrated, multidisciplinary monitoring plan that describes the various scientific assessments needed to inform the TRRP if the TRFES restoration strategy is achieving the goals of the TRRP. In 2010, Senior Fisheries Biologist, Tim Hayden coordinated with other TRRP partners to implement a request for

proposal-based process (RFP) to determine, and prioritize the various scientific assessments to be funded by the TRRP in FY 2011. This is the first year that the TRRP has implemented an RFP process. The Yurok Tribe will continue to work with TRRP partners to refine the RFP process in FY 2012, and develop a prioritized science workplan for the TRRP.

### *Trinity River Flow Scheduling 2010*

The ROD specifies annual release volumes based on five water-year classifications. Based on snow pack estimates and reservoir inflow estimates on April 1, the 2010 water year was classified as "Normal". Under the 2000 ROD Normal-year flow releases a total volume of 647,000 acre feet is available for instream flow purposes. The final 2010 Trinity River flow schedule recommendation (Figure 1.) was presented and approved by the TMC in April 2010.

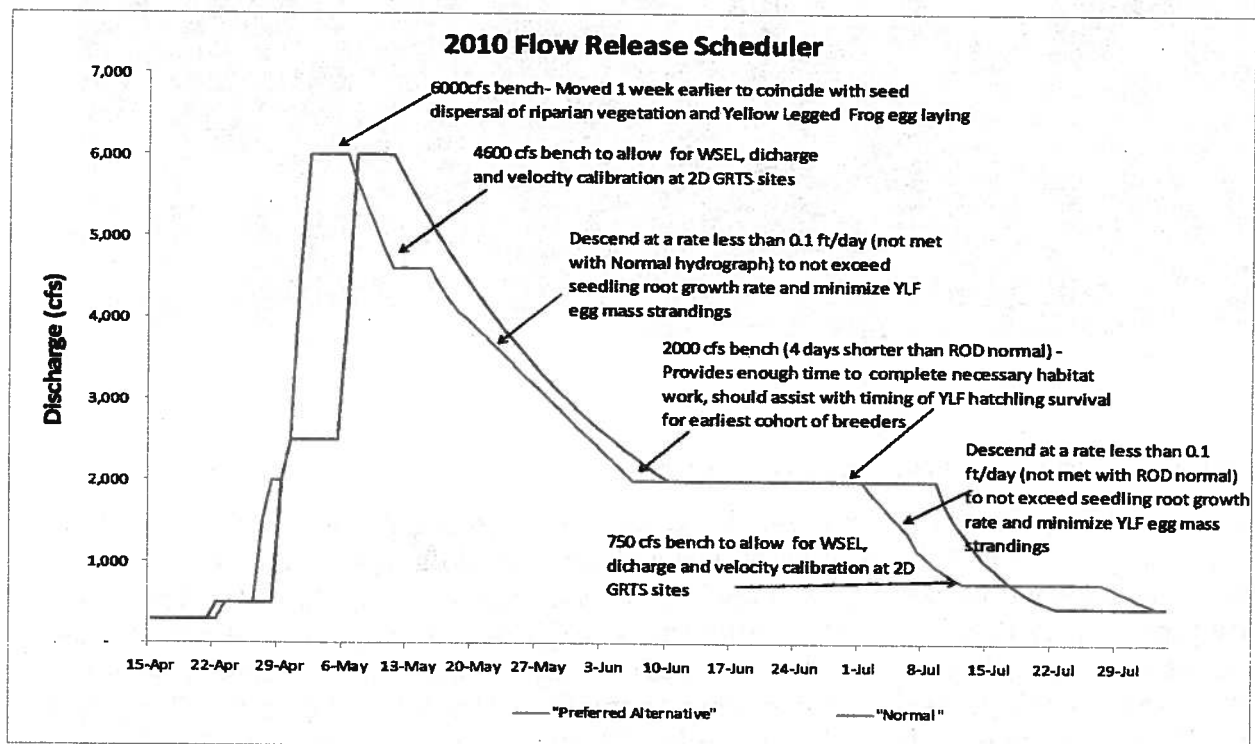


Figure 1. Recommended 2010 Trinity River Flow Releases.

### *TRRP Temperature Management Workgroup*

Senior Fisheries Biologist, Tim Hayden participates with TRRP partners on the newly formed Trinity Temperature Management Workgroup (TTMWG). The group will consist of technical representatives from the TRRP partners that will develop technical recommendations to BOR Northern California Area Office and the BOR Central valley Operations (CVO) to manage Trinity River water supplies to achieve temperature objectives defined in the Trinity River Biological Opinion. The TTMWG will interact directly with CVO and the Sacramento River Temperature Taskgroup (SRTTG), and develop both in-river and reservoir temperature modeling capabilities. In addition, the group will provide management recommendations, including reservoir/diversion operations and infrastructure improvements to increase the operational



flexibility within the Trinity Division of the CVP to meet temperature requirements for salmonid species. The TTMWG will continue to meet throughout the next year.

#### *Lower Trinity River Outmigration Monitoring*

In order to monitor annual juvenile salmonid outmigration abundance, timing, duration and the effects of TRRP management actions, the Trinity River Fisheries Division operates and maintains 3 rotary fish traps on the mainstem Trinity River near Willow Creek, California. The season began March 15, 2010 with the installation of two traps. A third trap was installed March 20, 2009. Trapping operations began in March and have continued 24 hours a day, 7 days a week until late-August, or as weather and river conditions permit. Efficiency based population estimates will be generated to allow statistically quantified estimation of emigration by application of mark-recapture techniques. This will continue a long-term quantified data set for use in determining the response of smolt production to Trinity River restoration activities. An additional component to this year's effort is the use of 135,000 hatchery produced juvenile Chinook to expand the mark-recapture effort and perform assumption testing as recommended in the recently completed TRRP Outmigration Monitoring Review. In addition, high quality quantified emigration estimates of Trinity River juvenile salmonid production will be critical in calibrating future fish production models. Fish Biologists, Nate Harris and Warren Peterson serve as field crew leaders for this project, with assistance from fisheries technicians; Tim Ulrich, Hank Alameda Jr., Albert Markussen, Jeremy Alameda and Larry Alameda Jr..



Figure 2. Lower Trinity River outmigration monitoring trap site, near Willow Creek, California.

#### *Channel Rehabilitation Site Pre-construction Habitat Assessment*

In 2010, Fisheries Biologist II, Aaron Martin continued to help lead an interagency habitat assessment focused on the Upper Trinity River. The team carried on their focus on assessing changes in rearing habitat at restoration sites as well as development of a 2-dimensional fish habitat model. This included post rehabilitation mapping at the Lewiston 4 sites and Dark Gulch projects and pre-rehabilitation mapping at the Lowden and Reading projects. This summer, the crew will continue systemic assessment of habitat across the entire 42 mile project area. Using the GRTS sampling tool, the team will map 32 – 400m sites that are spatially distributed throughout the project reach and estimate available fry and juvenile habitat at summer base flow. The team is also going to compare physical channel characteristics with available habitat in an attempt to integrate physical and riparian measures with habitat.





Figure 3. Yurok Fish Habitat crew using GPS, Tablet PC and laser rangefinder offset to map edge habitat.

#### *Lorenz Gulch Channel Rehabilitation Site Design*

In 2010, Fisheries Biologist II Aaron Martin, and Rocco Fiori have led the Yurok Tribe channel rehabilitation site design team to develop conceptual rehabilitation designs for the Lorenz Gulch site. Using topographic surveys (performed by Yurok Land Management) and biological and geomorphic expertise, in-channel habitat features and engineered log-jams were designed and drawn into a CAD layer. We wrote up a design document outlining the objectives and features for HEC-RAS certification by Trinity River Engineering to assess flooding potential near restoration areas.

#### *Mainstem Trinity River Chinook Salmon Redd and Carcass Spawning Survey*

The Yurok Tribe, U.S. Fish and Wildlife Service, California Department of Fish and Game (CDFG) and the U.S. Forest Service have cooperated for the past 9 years to conduct annual surveys to monitor spring and fall-run Chinook salmon, redd abundance and spawning distribution (Figure 4). Beginning on September 15<sup>th</sup> and ending on December 24<sup>th</sup>, the 2009 fall spawning surveys were conducted by Fisheries Technicians, Jeremy Alameda and Larry Alameda. TRFD staff collected important data on pre-spawn mortality, length/weight and sex ratio, and spatial distribution of chinook salmon redds and carcasses. Coded wire and CDFG



floy tags were also collected from carcasses in order to determine adult migration rates and natural/hatchery contribution to adult escapement. In addition, in 2009 the Yurok Tribe conducted weekly surveys between Lewiston Dam and Junction City utilizing mark/recapture techniques to estimate the total Chinook salmon spawning escapement. This information is critical to the TRRP to assess the effectiveness of Trinity River Record of Decision (ROD) flow releases and other restoration actions on the health of salmon and steelhead populations.

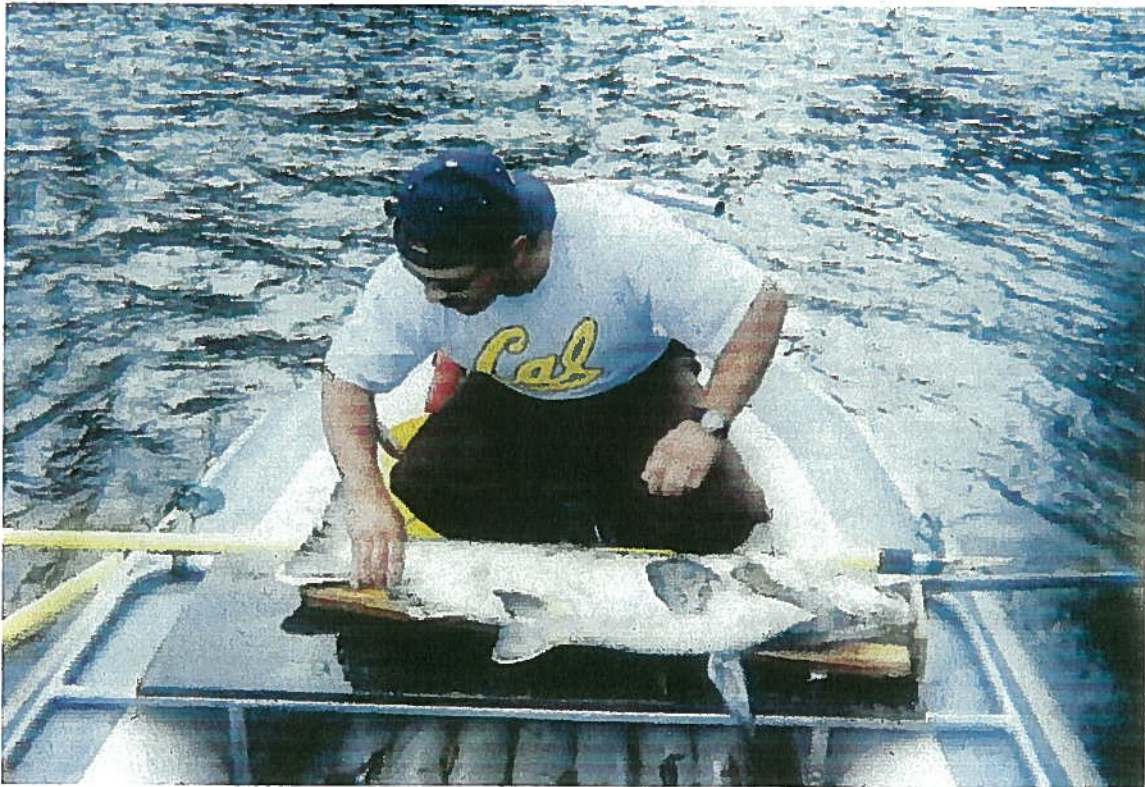


Figure 4. Yurok Fisheries Technician, Hank Alameda Jr. measuring adult fall Chinook salmon carcass on the upper Trinity River near Lewiston, California.

#### *Trinity River Hatchery Co-Management*

The Yurok Tribe is a co-manager of the Trinity River Hatchery located in Lewiston, California. The Trinity River Fish Hatchery (TRH) was constructed in 1964 as part of the Central Valley Project (CVP). The TRH is operated by the CDFG and has a production capacity of approximately 40 million salmonid eggs. The TRH is located immediately downstream of Lewiston dam (Figure 5) and serves to mitigate loss of upstream production of salmon of steelhead as a result of construction of the Trinity River Division of the CVP. As co-managers, the Yurok Tribe conducts investigative assessments of hatchery-natural interactions, with emphasis on predation, competition, and ecological interactions with naturally produced salmon and steelhead. Recent actions include re-initiation of tribal trust evaluation process to more clearly define tribal co-management of the TRH and integration of TRH operations and practices with ongoing TRRP fish habitat rehabilitation efforts in the mainstem to achieve natural salmon



and steelhead production goals.

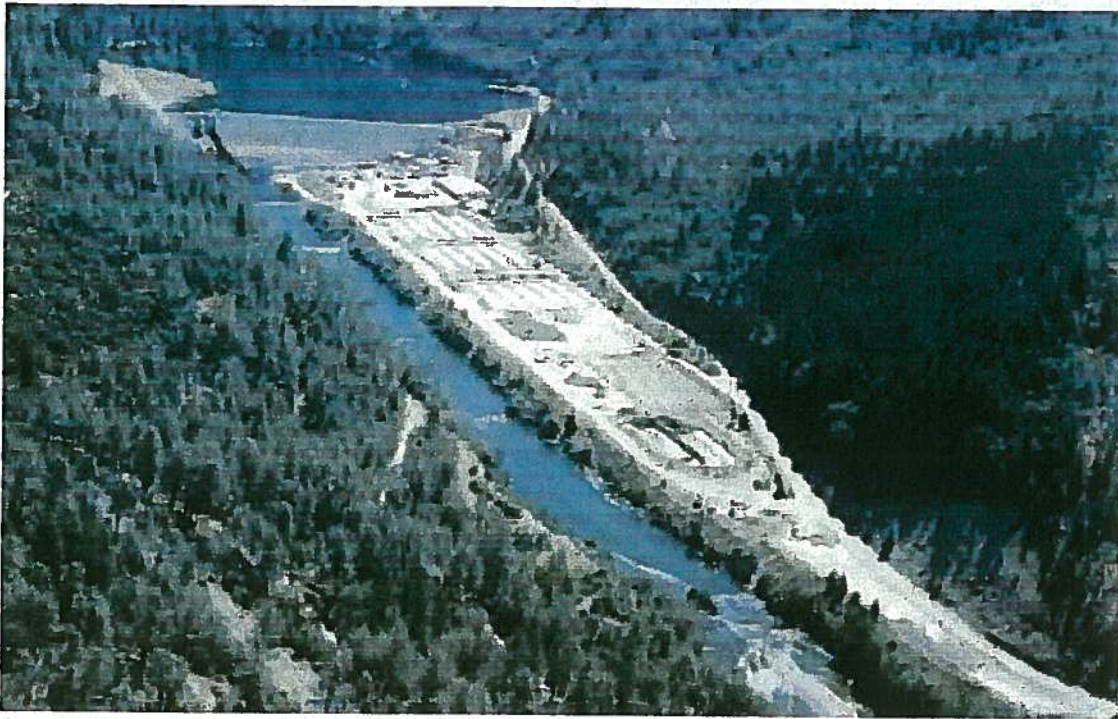
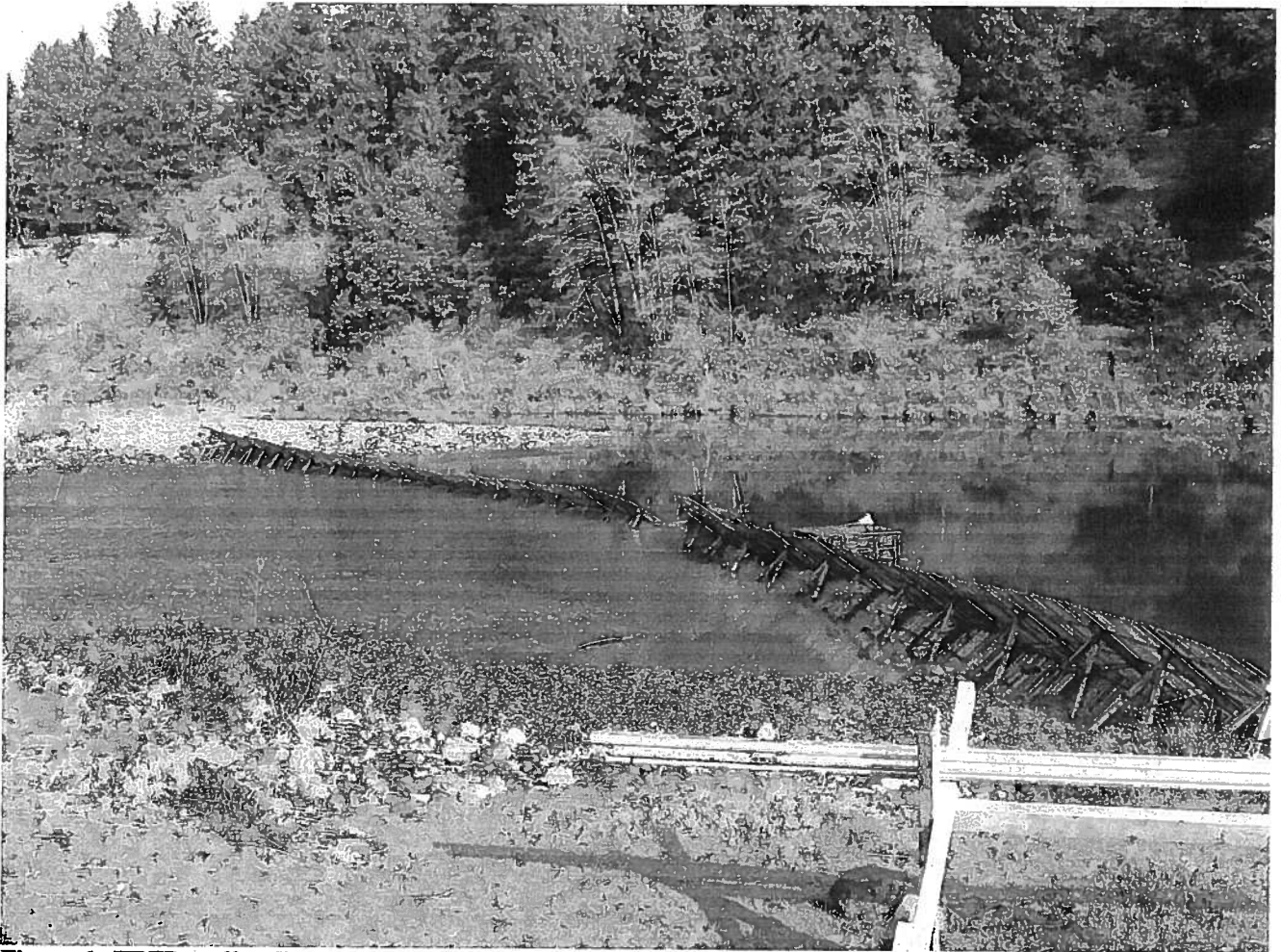


Figure 5. Lewiston Dam near Trinity River Hatchery, Lewiston, CA.

#### *Trinity River Adult Steelhead Straying Assessment*

In 2009, the TRFD initiated a preliminary study using a combination of Passive Integrated Transponder (PIT) tagging and radio-telemetry to assess the potential straying of hatchery produced adult steelhead. The purpose of this study was to provide feedback to TRH management in regards to current hatchery protocols and practices which may be detrimental to wild fish populations. Beginning in September 2009 and continuing through April 2010, Fisheries Biologist II, Shane Quinn and TRFD staff applied PIT and radio tags to adult hatchery steelhead captured at the Willow Creek fish weir or that had returned to TRH and subsequently released back into the Trinity River. The tagged steelhead were then tracked and detected at with PIT and radio telemetry receivers in various tributaries and in upper mainstem Trinity River. The tracking and monitoring of tags continued through May of 2010.



**Figure 6. TRFD staff radio-tagged adult hatchery produced steelhead at the Willow creek fish weir in the fall of 2009.**

### *Juvenile Chinook Salmon Fish Health Assessment*

TRFD Fisheries Biologist, Kyle DeJulio leads staff to collect samples of natural and hatchery juvenile Chinook salmon in the Klamath River below Weitchpec from May until mid-August. The TRFD has participated in this monitoring for the past several years as part of a basin-wide effort to assess the incidence and severity of fish disease outbreaks. The USFWS CA-NV Fish Health Center has performed disease monitoring studies in the basin since 1991, and observed high disease levels in juvenile Klamath River salmonids during the summer. Collected samples are processed by the USFWS Fish Health Center in Anderson. Yearly monitoring is intended to assess disease impacts and warn resource managers that action may be warranted.

In July, the YTFP 2010 sampling effort continued to target adipose fin clipped (ad-clip) hatchery Chinook juveniles. Two samples of 40 fish were collected by Trinity River staff and picked up by USFWS CA-NV Fish Health Center staff for further analysis. Ad-clip Chinook juveniles arrived in the sampling reach early in the month. Ad-clipped hatchery fish were prevalent and we were able to capture more than the required number for sampling. In past years the peak of the hatchery juvenile migration through this reach has occurred in July. The river has reached 22-23 C°, and fish are beginning to seek out thermal refuges and show more clinical signs of disease. We expect catch of ad-clipped juveniles to slowly fall off until the end of sampling.



## Harvest Management Division

### *Harvest Summary 2009*

The Fishery was monitored from April 1 through November 30, 2009. The table below summarizes the estimated harvest by species. Approximately 15,460 fish were sold during the Tribe's commercial fishery.

	Estuary	Mid-Klam	Up-Klam	Total
Spring Chinook	758	489	451	1,697
Fall Chinook	19,533	2,464	2,343	24,341
Coho	57	1	21	80
Steelhead	73	39	79	190
Green Sturgeon	10	45	90	146
White Sturgeon	3	2	0	5

### *Age Composition Project/ stock projection*

We led the fall Chinook age composition project for the entire Klamath Basin (the Hoopa Tribe covered the Trinity Basin). This project consist of : 1) collecting fish scales from fish from the fisheries, spawning grounds, and hatcheries; 2) cleaning and mounting the scales under a microscope, 3) projecting the scales so the age of the fish they came from can be determined, and 4) using the age information to determine the age of the 2009 fall Chinook run. We aged approximately 10,000 fall Chinook scales during 2009. This information was then used to predict the abundance of the 2010 fall Chinook run, which is used to determine the allocation for the various fisheries during 2010.

## Pacific Southwest

### Publication Information



**Title:** The Eel River, northwestern California; high sediment yields from a dynamic landscape

**Author:** Lisle, Thomas E.

**Date:** 1990

**Source:** In: M.G. Wolman and H.C. Riggs (ed.), Surface Water Hydrology, v. O-1, The Geology of North America, Geological Society of America. p. 311-314.

**Description:** The Eel River draining the Coast Range of northwestern California has the highest recorded average suspended sediment yield per drainage area of any river of its size or larger unaffected by volcanic eruptions or active glaciers in the conterminous United States (1,720 t/km<sup>2</sup> yr from 9,390 km<sup>2</sup>; Brown and Ritter, 1971).

**Keywords:** PSW4351, erosion, sediment transport, California, suspended sediment, sediment transporting process, hillslopes, channels, geology, hydrology, geomorphic

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US Forest Service - Research & Development  
Last Modified: June 28, 2010

## THE EEL RIVER, NORTHWESTERN CALIFORNIA; HIGH SEDIMENT YIELDS FROM A DYNAMIC LANDSCAPE

*Thomas E. Lisle*

The Eel River draining the Coast Range of northwestern California has the highest recorded average suspended sediment yield per drainage area of any river of its size or larger unaffected by volcanic eruptions or active glaciers in the conterminous United States (1,720 t/km<sup>2</sup>yr from 9,390 km<sup>2</sup>; Brown and Ritter, 1971). These high rates of erosion and sediment transport result from a combination of widespread tectonic deformation of the underlying rocks, recent rapid uplift of the landscape, high seasonal rainfall, and widespread disruption of the ground surface by man in the last century. Not surprisingly, the basin has some unusual geomorphologic characteristics. Sediment-transporting processes on hillslopes and in channels are closely linked, and as a result, high-magnitude, low-frequency climatic events are more responsible for forming channels than in most other areas.

### BASIN CHARACTERISTICS

#### *Geology*

The Eel River basin is underlain almost entirely by the Franciscan assemblage of complexly deformed, continental margin deposits of Late Jurassic to mid-Tertiary age (Bailey and others, 1964; Jones and others, 1978). The area has undergone uplift since mid-Miocene time (Bailey and others, 1964). Franciscan rocks are predominantly sandstone and shale, but also include tectonically emplaced blocks of volcanics and low-grade metamorphic rock. Bedrock has been pervasively sheared to various intensities over the basin. Zones of weakness trending generally north-northwest have created a trellis network of drainages. Narrow, deeply cut canyons incised below moderately dipping upper slopes, on which older soils are developed, attest to recent or ongoing uplift of the area, although local downwarping has formed isolated depositional basins in the Eel valley (Kelsey, 1982).

#### *Hydrology*

The Mediterranean climate of the area is conducive to the production of high sediment yields. Annual precipitation is heavy (averaging 1,500 mm basinwide and 2,800 mm at high elevations) and seasonal, with 90 percent falling between October and April. During winter, northern California has the highest latitudinal temperature gradients of any area in the Pacific Northwest (Janda and Nolan, 1979). This produces intense storms that commonly travel perpendicular to the trend of the Coast Range, which are as high as 2,000 m in the Eel basin. As a result, large cyclonic storms lasting several days have produced widespread rainfall totaling more than 250 mm on several occasions in the last 40 years (Harden and others, 1978).

Runoff from the basin, averaging 890 mm annually, is highly variable because of seasonality of rainfall, infrequent large storms, and poor retention of water in the basin. At Scotia (Fig. 24), the discharge equaled or exceeded 99 percent and 1 percent of the time equals 0.0004 m<sup>3</sup>sec<sup>-1</sup>km<sup>-2</sup> and 0.8 m<sup>3</sup>sec<sup>-1</sup>km<sup>-2</sup>, respectively (Rantz, 1972). Most importantly from a geomorphic standpoint, large flood flows are generated by moderately intense rain falling over the entire basin for a number of days and, in some cases, by snowmelt during warm winter storms (Harden and others, 1978). Little flood runoff is stored in the basin due to the steep slopes and constricted valley bottoms.

#### *Sediment yield*

High suspended-sediment discharges from this area result from a combination of high sediment concentrations (averaging 3,000 ppm over discharge at Scotia; Holeman, 1968) and, particularly, high rates of runoff (Janda and Nolan, 1979). Gullying and mass movement accelerated by human disturbance of the erodible terrain provide inexhaustable supplies of fine sediment that can be carried quickly to stream channels (Nolan and Janda, 1982). With increasing precipitation, there is greater surface erosion of broken ground in active earthflows and on soil bared by grazing, timber harvesting, and road building. Also, increasing soil moisture and erosion of toes of streamside slides and earthflows can accelerate mass movement directly into channels. Finally, high annual precipitation in the basin does not promote a denser protective cover of vegetation than in areas with less precipitation. Little of the precipitation falling in winter can be utilized for plant growth, and under natural conditions the basin is already well vegetated except on steep hillslopes along downcutting channels. As a result, sediment discharge increases with annual precipitation in the Coast Range (Janda and Nolan, 1979), unlike most other areas (Langbein and Schumm, 1958; Wilson, 1973).

Also unlike most areas, suspended sediment discharge per unit area in the Eel River increases with basin size (Brown and Ritter, 1971; Janda and Nolan, 1979). Because of ongoing uplift, main channels are commonly more deeply incised than their tributaries, and so streamside landslides, which are major sources of sediment, are particularly abundant along main channels. Parent material is generally soft and friable, and thus, bed particles rapidly break down into smaller sizes (Knott, 1971). Consequently, suspended-sediment load increases downstream at the expense of bedload (Brown and Ritter, 1971).

### VARIATIONS IN GEOMORPHIC FORMS AND PROCESSES

The geologic complexity and youthfulness of the landscape are reflected in the variety of hillslopes and channels. Lithology and the degree of fracturing of the bedrock control local erosion rates, erosional landforms, and channel morphology (Janda, 1979).



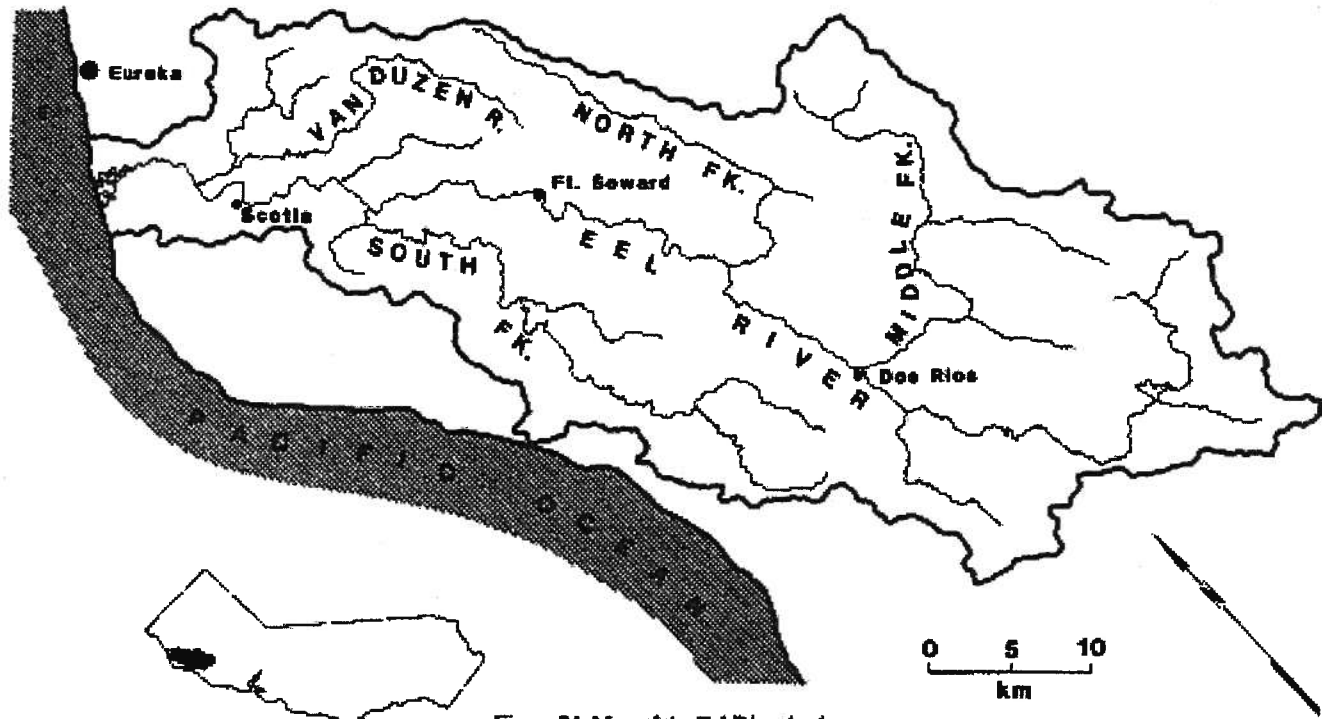


Figure 24. Map of the Eel River basin.

### *Mélange terrain*

Highly fractured *mélange* units in the middle reaches of the Eel and Van Duzen basins contain abundant streamside slumps and earthflows that directly contribute large volumes of sediment to channels (Brown and Ritter, 1971; Kelsey, 1980). Estimated average annual sediment yield from a stream draining an earthflow is 24,000 t/km<sup>2</sup> (Kelsey, 1980)-about ten times that for the Eel basin as a whole. Sixty-eight percent of the suspended sediment discharge of the Eel River upstream of Scotia comes from 36 percent of the basin-the reach between Dos Rios and the junction with the South Fork (Fig. 24) - which contains the greatest areas of *mélange*, earthflows, and streamside slides (Brown and Ritter, 1971).

Most of the sediment from *mélange* terrain is sand or finer material eroded from toes of earthflows (Nolan and Janda, 1989) and from gullies cut on steep and disrupted hillslopes (Kelsey, 1980). However, earthflows that impinge on channels can contribute blocks of exotic material as large as 10 m and more in diameter and create extremely narrow, steep, coarse channels. These constrictions have led to the formation of depositional reaches upstream that have wide, alluvial channels and gentler streamside slopes. The alternation of these contrasting reaches produces large-scale steps in longitudinal channel profiles (Kelsey, 1980).

### *Competent terrain*

Areas of more competent, graywacke sandstone are generally forested, have lower mass transport rates than *mélange* ter-

rain, and contain "V"-shaped valleys with steep straight hillslopes. Debris slides and avalanches are the predominant sediment sources. These contribute abundant coarse material to channels, but maximum particle size is smaller than that from earthflows. Stream gradients are not unusually steep, and most coarse material entering from hillslopes can be transported downstream during annual floods. Average annual sediment yield from stable forested basins is estimated at 300 t/km<sup>2</sup> (Janda and Nolan, 1979; Kelsey, 1980)-only about one-tenth of the average for the Eel basin.

### *Effect of land use*

Although soils are generally permeable and stable on slopes less than 30° (Brown and Ritter, 1971), disturbance of the ground cover can greatly accelerate surface and mass erosion in both stable and unstable areas. Despite the low population density, large areas of the basin are affected by grazing, timber harvesting, or associated road construction. Loss of tree-root strength in uncohesive soils (Ziemer, 1981) has probably helped to destabilize clearcut hillslopes; grazing and the replacement of native perennial grasses by European annuals with shallower roots has probably increased gully erosion of grasslands (Kelsey, 1980). Anderson (1970) estimated that intensive timber harvesting and associated road building from about 1950 to 1975 increased sediment yields several fold. Nolan and Janda (1981) measured a 10-fold increase in suspended-sediment discharge from tractor-yarded clearcuts in tributaries of Redwood Creek. The coincidence of concentrated timber harvesting and a series of large floods, how

ever, makes it difficult to separate the effects of these two impacts on erosion and sediment yield (Harden and others, 1978; Kelsey, 1980).

### EFFECTIVENESS OF LARGE FLOODS IN SHAPING THE LANDSCAPE

Several authors have concluded that high-magnitude, infrequent floods have a greater impact on the landscape relative to smaller floods in northwestern California than in other areas (Janda and Nolan, 1979; Kelsey, 1980; Lisle, 1981; Nolan and Marron, 1985). During the flood of December 1964, rainfall recorded at more than 550 mm during 48 hr in some locations produced stages in the Eel River 2 to 5 m above previous records (Waananen and others, 1971; Brown and Ritter, 1971). Peak flood discharge of the Eel River near its mouth was  $26,500 \text{ m}^3\text{sec}^{-1}$ , corresponding to runoff rates of  $2.82 \text{ m}^3\text{sec}^{-1}\text{km}^{-2}$ . This flood ranks among some of the world's great recorded floods for a basin of this size (Wolman and Gerson, 1978). Kelsey (1980) estimated the recurrence interval of the 1964 flood in the Van Duzen River, a major tributary, at approximately 100 yr. The flood caused profound changes in sediment transport rates and long-lasting changes in hillslopes and channels. Some morphologic changes persist today.

#### *Sediment transport by large floods*

Large, infrequent flows transport a relatively large proportion of sediment in the Eel River. At three gaging stations in the basin, discharges below which 90 percent of the suspended sediment load is carried have recurrence intervals between 3 and 16 years (Nolan and others, 1987). At these stations, the proportion of sediment carried by discharges of given frequencies increases with decreasing frequency of discharge and reaches a node at moderate frequencies (recurrence interval of 1.2 to 1.6 yr), as observed in other regions. The proportion remains high for infrequent discharges at the Van Duzen station, however, and increases again with further decrease in discharge frequency at the Fort Seward and Black Butte River stations. At Black Butte River, a major tributary upstream of Dos Rios, the greatest proportion of load has been transported by the most infrequent discharges.

During the 1964 flood, 105 million tonnes of suspended sediment were transported past Scotia during a 3-day period, compared to 85 million tonnes transported during the previous 8 years (Brown and Ritter, 1971). The flood accounted for 7 percent of the total sediment discharge of the Van Duzen River during a 35-yr period, and mobilized as much bed load as moves out of the basin in a century (Kelsey, 1980). Suspended-sediment concentrations at a given discharge increased several-fold and remained high for 2 to 5 years after the flood (Anderson, 1970; Knott, 1971).

### *Effects on channels and hillslopes*

One reason why large floods are so important in shaping stream channels in the Coast Range is that material mobilized from landslides during large storms is commonly carried directly to stream channels instead of to lower hillslope sites or valley flats. Air photos of the basin taken before and after the 1964 flood (Fig. 25) show increased incidence of new landslides and long reaches of greatly widened channels (Brown and Ritter, 1971; Kelsey, 1977). For instance, the length of stream banks affected by debris avalanches increased 423 percent in the upper portion of the Van Duzen basin and 119 percent in the lower portion (Kelsey, 1977). Voluminous coarse debris from debris avalanches and torrents led to widespread channel braiding, channel widening commonly more than 100 percent, and aggradation more than several meters in some reaches (Hickey, 1969; Brown and Ritter, 1971; Knott, 1971; Kelsey, 1977). In areas where landslides were voluminous, aggradation and channel-widening downstream caused additional streamside failures by erosion of supporting material at the base of hillslopes (Kelsey, 1977; Janda and Nolan, 1979).

In addition to widening, channels adjusted to the increased sediment load by reducing bar-pool bed topography and thereby reducing hydraulic friction (Lisle, 1982). As a result, velocity increased and depth decreased at a given discharge, signifying an increase in bed-load transport capacity (Knott, 1971; Lisle, 1982). These adjustments may have accelerated the flushing of excess material from the channel networks. Associated changes in aquatic habitat may have contributed substantially to the decline in populations of anadromous salmonids in the basin (California Department of Water Resources, 1974).

### *Channel recovery*

The 1964 flood appears to have been effective in shaping stream channels of the Eel basin, according to Wolman and Gerson's (1978) criteria, because the changes have persisted in some reaches up to the present (Lisle, 1981; Kelsey and Savina, 1985). In some reaches, channel patterns and flood deposits along the higher margins of channels will be altered little until a flood of equal or greater magnitude recurs (Kelsey, 1977).

Channels have recovered in overlapping stages dependent on a sequence of processes. First, suspended-sediment concentrations declined to pre-flood levels within about 5 years. Second, as excess bed material has been transported downstream, channel beds have degraded to stable levels at or above pre-flood elevations over periods of a few years or longer, and some reaches may remain aggraded into the next century (Kelsey, 1980; Kelsey and Savina, 1985; Lisle, 1981). These periods depend apparently on the volume and coarseness of aggraded material, channel gradient, and distance from sediment source. During channel-bed degradation, hydraulic geometries have recovered to some degree

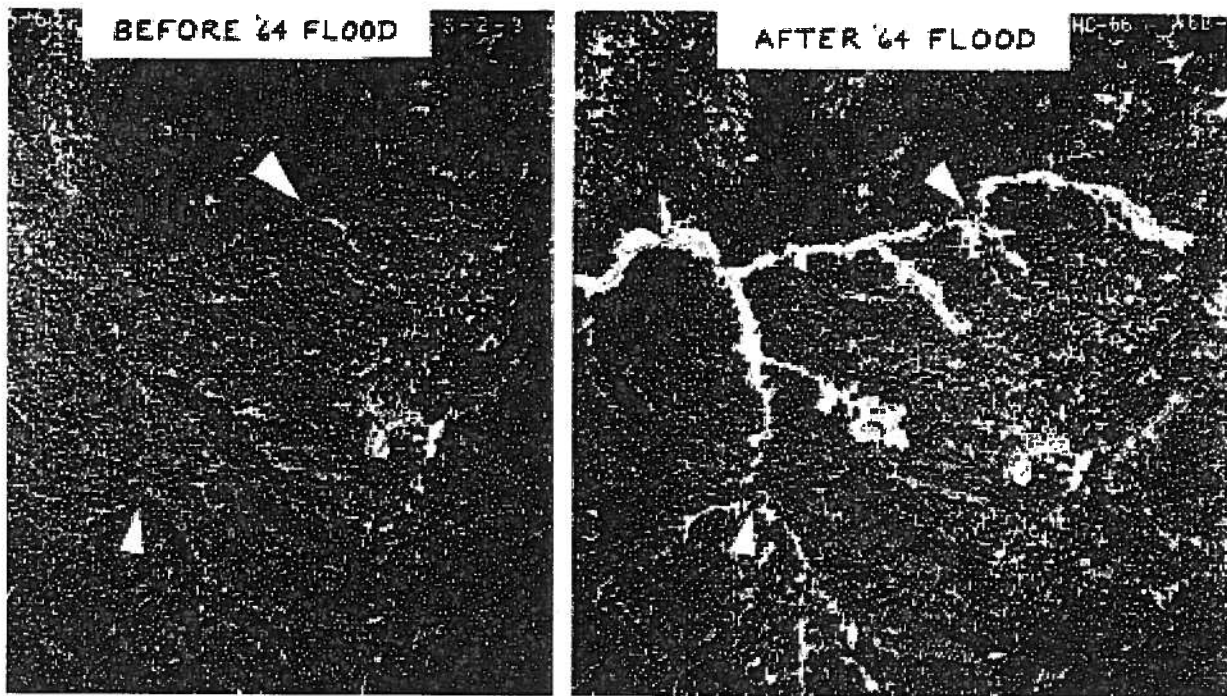


Figure 25. Aerial photographs taken in summers of 1963 and 1966 of the headwaters of the South Fork Van Duzen River, showing changes due to the 1964 flood. (From Kelsey, 1977, with permission). The white arrows identify the same channel reaches on both photos. Lighter areas in the 1966 photo were revegetated by debris avalanches, debris torrents, and widened, aggraded stream channels.

to pre-flood relations. The degree of recovery apparently depends on reestablishment of pre-flood channel widths (Lisle, 1982)--the third phase of channel recovery. Channels in alluvial reaches have incised into flood deposits, leaving a narrower channel bounded by sparsely vegetated flood deposits. Many tributary channels that are bounded on at least one bank by bedrock or colluvium have remained wide, however. Soil creep and dry ravel can be slow in replacing eroded banks, and new bank material is frequently scoured by high flows contained in narrow valley bottoms (Lisle, 1981). Riparian vegetation (primarily red alder and willow), which aids bank accretion along low-flow channel margins, is also subject to scour during high flows. Riparian trees are now well established along many reaches, however, due to the absence of large floods since 1975.

## CONCLUSIONS

Erosive bedrock, rapid uplift, high seasonal rainfall, and recent disturbance by man have produced exceptionally high sediment yields from the Eel River basin. Because channels are commonly bounded by hillslopes in narrow valleys, channel morphology and sedimentology are strongly influenced by adjacent hillslope processes, which vary with the lithology and degree of shearing of bedrock. Because of the close linkage between channel and hillslope processes and the occurrence of high runoff events, large floods produce and transport a large proportion of fluvial sediment and cause widespread, persistent changes in

channels. Subsequent remolding of channels by smaller discharges proceeds with the transport of excess sediment out of channels and the reconstruction of streambanks. These sequences of channel recovery can require as long as several decades.



Submitted  
08/29  
Shelter  
Cove

To: Ken Wiseman; Executive Director MLP AI  
Melissa Miller-Henderson; Program Manager MLP AI

(672)

25

From: Citizens Alliance - wishing to vote for no additional MPAs in the North Coast Region allowing only the existing Punta Gorda State Marine Reserve.

We the undersigned represent a large group of disenfranchised, directly affected stakeholders, who would like to propose no expansion of the existing MPAs in the North Coast region, an option that has been excluded from stakeholder proposals. We would also propose the State protect existing MPAs from mineral extraction, aquaculture, pollution, energy farms and other damaging manmade effects.

Print Name	Signature	Town	Occupation
Joseph Arlotta	Joseph Arlotta	Shelter Cove	Tractor Launch
Seneca Silva	Seneca Silva	Shelter Cove	Student
Justin Abramson	Justin Abramson	Antelope	Unemployed
Scott Bishop	Scott Bishop	Whitethorn	Self Employ
Byron Mager	Byron Mager	Shelter Cove	Retired
Craig Eubank	Craig Eubank	Shelter Cove	Retired
MARC PHIPPEN	Marc Phippen	EUREKA	BUILDING INSPECTOR
ROBERT MARGUW	Robert Margu	EUREKA	Retired
Jaleen Pergall	Jaleen Pergall	Shelter Cove	House keeper
Barbara Dingler	Barbara Dingler	Shingle Spring	psychotherapist
John Bingham	John Bingham	Shingle Springs	Psychiatrist
Brandon Larsen	Brandon Larsen	Fortuna	Cultures
Travis Agu	Travis Agu	Eureka	Hydrologist
ORLANDO RECHA	Orlando Recha	Winters	BIOLOGIST
VALERIE LILLIE	Valerie Lillie	Redwood	File Maintenance
BEN FIESELER	Ben Fieseler	Whitethorn	Surfer
BON MITTEN	Bon Mitten	Shelter Cove	Pilot
STEVE SPENCE	Steve Spence	Moody	Business
Chad Ebbert	Chad Ebbert	Shelter Cove	MASON
Melanie Mearns	Melanie Mearns	SACRAMENTO, CA	Advertising
TARA SHININGSTAR	Tara Shiningstar	Shelter Cove, CA	yoga inst., massage therapist
Tobe Halton	Tobe Halton	Shelter Cove, CA	carpenter
Dennis Sullivan	Dennis Sullivan	Shelter Cove	Resident/Retired
Jim Hargimian	Jim Hargimian	Davis, CA	Builder/Fisherman
Denise Reid	Denise Reid	Shelter Cove	Cook

To: Ken Wiseman; Executive Director MLP AI  
Melissa Miller-Henderson; Program Manager MLP AI

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Print Name	Signature	Town	Occupation
Julie Ann Groves		Garberville	Florist
Briggs Groves		Salmon Creek	Contractor
JIM SHIRAISHI		Salmon Creek	Farmer
JOSHUA L. CLOCK		MIRANDA	CONTRACTOR
Jill Gward		Miranda	RN
Mea Coulter		Miranda	super model
Rae Shiraishi		Salmon Creek Miranda	farmer
Tessa Hernandez		Eureka	Special needs Aide
Michelle Bushnell		Blockburg	School Bus driver
Paul Neupert		ETTESBURG	HANDYMAN
Cynthia Miller		Shelter Cove	Welder
Victor J Gore		Susana, CA	C/O
Tanya Thompson		Shelter Cove	Housekeeper/clean
S. Apar		Eureka	Fisherman
FELISA WAGNER		SHELTER COVE	CEO
Carlene Mann		Glenn, CA	Farmer
Hoyland Kersh		Whitethorn, CA	Author
Kathy Cannon		CA	KATHY CANNON
Cheri & Frederiksen		Harvest Bch, CA	N.P.O. Director
Tom Wing		298 Parkway	SALES
Leslye Wing		298 Parkway	Web Design
Pat Tarabonovic		209 Bamburgh	Retired
Diane Donnelly		San Jose	Retiree
Wm Donnelly		San Jose	INS AGENT
Thompson Simpson		Shelter Cove	CARPENTER

To: Ken Wiseman; Executive Director MLPAI  
Melissa Miller-Henderson; Program Manager MLPAI

7-19-10

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Print Name	Signature	Town	Occupation
Maggio Appel Don Gomes	Maggio Appel Don Gomes	Shelter Cove Eureka	Landscape Unemployment
Christlanson	Chris	Loma Linda	RN
MARTY FLORA CARLO BOKORE	Marty Flora Carlo Bokore	Shelter Cove "	Potter Retired
W.H. TOBELER	W.H. Tobeler	"	Retired
W.W. MCCORMY	W.W. McCormy	"	"
Bill Kropf	Bill Kropf	OAKFLEX PA	"
KEN WRIGHT	Ken Wright	Shelter Cove	CAMP HOST
Gyonne Spencer	Gyonne Spencer	Arcata, CA	disabled
LARRY R. HOLLOWAY	Larry R. Holloway	BISHOP CA	RETIRED
Linda Hollowell	Linda Hollowell	Bishop Ca	Retired
Terri Knapp	Terri Knapp	Bishop, CA	Retired
LINDA LEE KNAPP	Linda Lee Knapp	Bishop, CA	Retired
Barbara Pitcher	Barbara Pitcher	Arcata, CA.	Childcare Provider
Darrell Pitcher	Darrell Pitcher	Arcata, CA	Marine Welder
Katelyn Wingert	Katelyn Wingert	Hayfork CA	High School
Karlie Elliott	Karlie Elliott	Hayfork, CA	High School Student
JEFF FISHER	Jeff Fisher	INCLINE VILLAGE NV	PILOT
BILL FISHER	Bill Fisher	MAGALIA CA	COST ANALYST
Drake Fisher	Drake Fisher	Paradise CA	Student
Wendy Jensen	Wendy Jensen	Colfax, CA	TEACHER
Marah Boyd	Marah Boyd	"	
JIM SHARY	Jim Shary	Chico, CA	Engineer
SANDRA MESTAN	Sandra Mestan	Pollock Pines CA	Sales



To: Ken Wiseman; Executive Director MLP AI  
Melissa Miller-Henderson; Program Manager MLP AI

25

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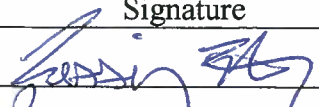

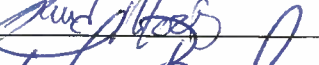


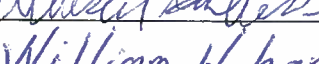
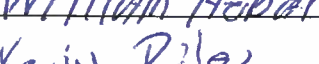


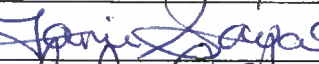



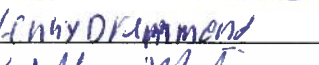


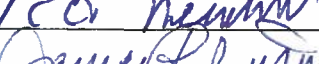



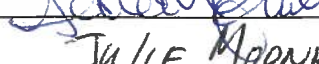
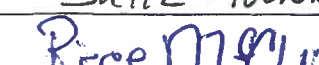



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Print Name	Signature	Town	Occupation
Csrey mcmurry	Csrey mcmurry	Shelter Cove	unemployed
A.J. Machi	A.J. Machi	Shelter Cove	Water Tank Installer
Adam Hammack	Adam Hammack	Shelter Cove	Welder
Evan Hammack	Evan M. Hammack	Shelter Cove	—
April Hammack	April Hammack	Shelter Cove	Student
Kristin Hammack	Kristin Hammack	Shelter Cove	Student
Dana Drummond	Dana Drummond	Shelter Cove	Tractor driver
Robert King	Robert King	Arcata	Construction
Paul King	Paul King	Arcata	Construction
Kody King	Kody King	Arcata	Construction
Josh Bennett	Josh Bennett	Arcata	Student
Amanda Rose	Amanda Rose	Shelter Cove	mom
John Neill	John Neill	Shelter Cove	BAKHO
Thomas Carport	Thomas Carport	GARBERVILLE	FISHERMAN
Danielle Sigurdson	Danielle Sigurdson	Shelter Cove	teacher
Ted Blair	Ted Blair	Shelter Cove	operator
Therion Blair	Therion Blair	Shelter Cove	Kid
Kayden Blair	Kayden Blair	Shelter Cove	Kid
Jonathan Jeffery	Jonathan Jeffery	Shelter Cove	Fishermen Commercial (SC)
Brenden Drenth	Brenden Drenth	Redway	Fisherman
Gene McGrath	Gene McGrath	Watsonville	Wastewater
John McGrath	John McGrath	Honeydew	Biologist
Jerry Van Lare	Jerry Van Lare	Shelter Cove	retired
Mark Van Lare	Mark Van Lare	Shelter Cove	Const.
Tenn Tobeker	Tenn Tobeker	Shelter Cove	Core

To: Ken Wiseman; Executive Director MLPAI  
Melissa Miller-Henderson; Program Manager MLPAI

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Print Name	Signature	Town	Occupation
Cassidy Etter		Shelter Cove	Fire fighter
Rodney Morris		Shelter Cove	Fisherman
Jared Morris		Shelter Cove	Diver/Boatman
Tom Boyd		Shelter Cove	Contractor
Trent Slate		Shelter Cove	Charter captain
William Anderson		Shelter Cove	Carpenter
William Hobard		Brice Land	Fisherman (Comm)
Kevin Riley		Shelter Cove	Fisherman
Reta Riley		Shelter Cove	Teacher's Aide
Ed Ulrich		Shelter Cove	Retired
Tami Savage		Shelter Cove	Resident
John Armstrong		Shelter Cove	Carpenter
Pam Armstrong		Shelter Cove	Housewife
Colin Wilkinson		Whitethorne	Retired
Kenny Drummond		Shelter Cove	Carpenter
William Malinowski		Shelter Cove	Contractor
Chris A. May		" "	Fisherman (Comm)
Terry Neubert			
James Robinson		Shelter Cove	Retired
Charlene Doty		Shelter Cove	Cook
Paul Doty		Shelter Cove	Body work
Sarah Finley		Shelter Cove	Bookkeeper
Julie Mooney		Shelter Cove	Clerk
Rice M. Cluskey		Shelter Cove	Cook
Lucas Sack		Shelter Cove	Handy man/Fisherman (Comm)

To: Ken Wiseman; Executive Director MLPAL  
Melissa Miller-Henderson; Program Manager MLPAL

7-19-10

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Print Name	Signature	Town	Occupation
Frank Humphrey HANK TOBORG	Frank Humphrey	Redway	Commercial Fisherman (SC)
GEORGE BENNETT	George Bennett	PHILLIPSVILLE	RETIRED
Aaron Doyle	Aaron Doyle	Redway	Ret
Tait-Lyn Reese	Tait-Lyn Reese	Shelter Cove	Construction
Waylon Benz	Waylon Benz	Ettersburg	Store stocker
Christa Wisneski	Christa Wisneski	Leggett	Truck Drive
Darren Brown	Darren Brown	Redway	musician
Jeff Blais	Jeff Blais	Miranda	Refect
Charlotte Johnson	Charlotte Johnson	Miranda	Sporting Goods
Shawnee Wood	Shawnee Wood	Garberville	Guide
Jackson Wood	Jackson Wood	Garberville	Disabled
Bert Thomas	Bert Thomas	Redway	Housewife
Rick Smith	Rick Smith	Garberville	Truck Driver
Bill Huck	Bill Huck	"	Stump Grander
Steve Huck	Steve Huck	"	CONST. MGMT.
A.W. Huck	A.W. Huck	Redway	Const
<del>Eric Moore</del>	<del>Eric Moore</del>	Redway	Truck driver
Eric Moore	Eric Moore	Redway	Logger
Frank E. Miller	Frank E. Miller	Garberville	construction
Michael J. Pogue	Michael J. Pogue	Wcott	State Parks
Dan Gilweil	Dan Gilweil	REDWAY	Plumbers
Daniel Arias	Daniel Arias	Alderpoint	Shoe Repair
Bryan clary	Bryan clary	palo verde	construction
Nicole Walker	Nicole Walker	garberville, CA	self-employed
DAVID PHOBY	David P Phoby	Shelter Cove	Recycler



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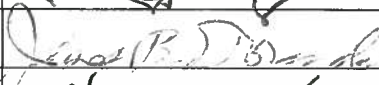
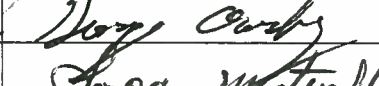
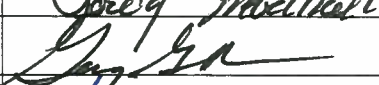
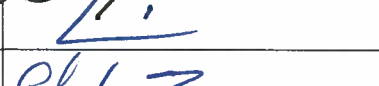




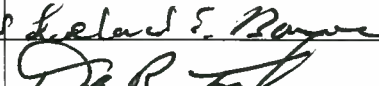
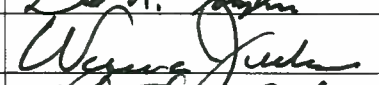
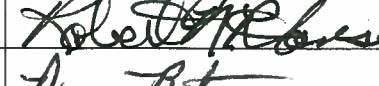
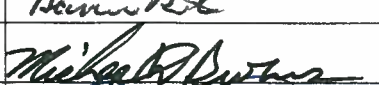
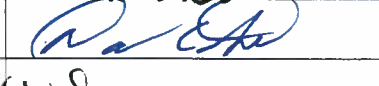
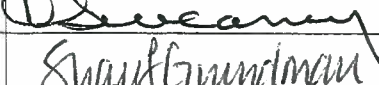
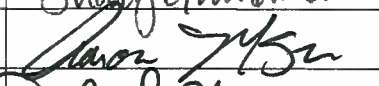
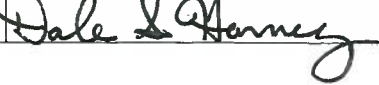

Print Name	Signature	Town	Occupation
SUSAN SACK	<i>Susan Sack</i>	SHELTER COVE	SECRETARY/FISH WIFE
Todd NUSE	<i>Todd Nuse</i>	Shelter Cove	POWER LINEMAN
Cyke Dillon	<i>Cyke Dillon</i>	Shelter Cove	Tree Climber
Bud Lair	<i>Bud Lair</i>	shelter cove	RID CONSTRUCTION LABORER
ANTONETTE LAIR	<i>Antonette Lair</i>	SHELTER COVE	OFFICE CLERK
Richard Culp	<i>Richard Culp</i>	Shelter Cove	Civil Engineer
FRANK Kambish	<i>Frank Kambish</i>	SHELTER COVE	CLERK METER READER
ROGER BOEDECKER	<i>Roger Boedeker</i>	SHELTER COVE	RETIRED EDUCATOR
RICHARD MONTANTE	<i>Richard Montante</i>	SHELTER COVE	SHELTER COVE INN OWNER
DAVID GILCHRIST	<i>David Gilchrist</i>	SHELTER COVE	CONTRACTOR
Doglan Karabancovic	<i>Doglan Karabancovic</i>	Shelter Cove	Retiree
Gina Froslic	<i>Gina Froslic</i>	Shelter Cove	hairstresser
DJ MILLETTE	<i>DJ Millette</i>	GARBERVILLE CA.	ELECTRICAL SUPERINTENDENT
Joseph Michael Pagret	<i>Joseph Michael Pagret</i>	Shelter Cove	Contractor
Nancy Mitchell	<i>Nancy Mitchell</i>	Shelter Cove	State Employee Auditor
MARK MITCHELL	<i>Mark Mitchell</i>	Shelter Cove	CA. State Employee
MIKE CALDWELL	<i>Mike Caldwell</i>	SHELTER COVE	INN KEEPER
Vicky Lodia	<i>Vicky Lodia</i>	Shelter Cove	NO-NELECTRIC
Frank Wilson	<i>Frank Wilson</i>	Shelter Cove	Utility Worker
LaDonna Byers	<i>LaDonna Byers</i>	Shelter Cove	retired
Kathryn Seil	<i>Kathryn Seil</i>	Shelter Cove	retired
BRIAN Speedman	<i>Brian Speedman</i>	MIRANDA, CA	CONSTRUCTION
Charles F. Msey	<i>Charles F. Msey</i>	Shelter Cove	FISHERMAN
Hannah K. NUSE	<i>Hannah K. Nuse</i>	Shelter Cove	Student
Airika Andres	<i>Airika Andres</i>	Shelter Cove	Message therapist

To: Ken Wiseman; Executive Director MLPAL  
Melissa Miller-Henderson; Program Manager MLPAL

7-19-10

From: Citizens Alliance - wishing to vote for no additional MPAs in the North Coast Region allowing only the existing Punta Gorda State Marine Reserve.

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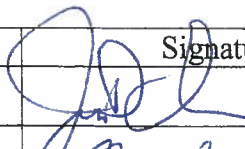
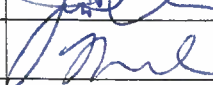
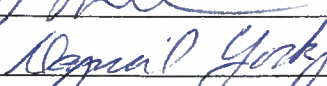
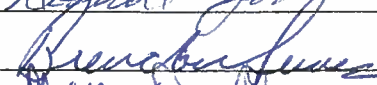

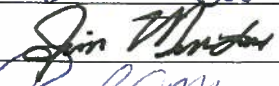
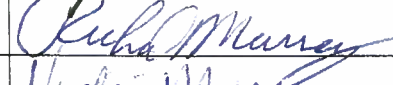

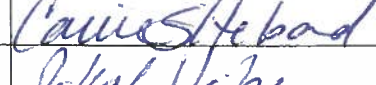
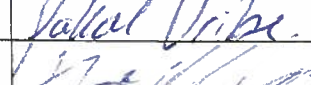

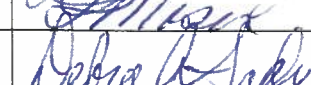
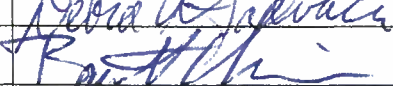
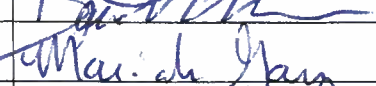
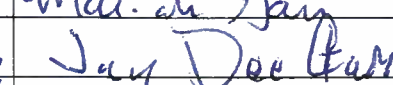

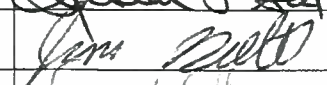
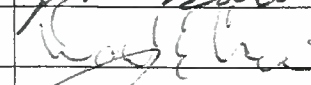
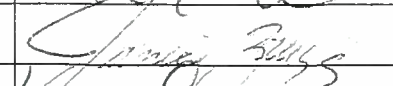


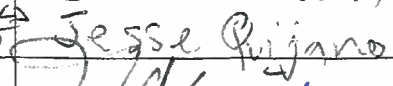



Print Name	Signature	Town	Occupation
Fred Grundman		Rio Dell	Business owner
PAUL GRUNDMAN		Rio Dell	GUNSMITH
LEE TATE		McKinleyville	Lumber Sales
James B. Motwede		Rio Dell	Retired
George S. Owsky Jr.		Fortuna	Vacuum sales & repair
LEROY MARTINELLI		RIO DELL	RETIRED
GARY B. RENNER		FORTUNA	RETIRED
Steven T. Deike		Fortuna	controller
Chris Freeman		Bayside	Controller
Dave Kist		EUREKA	RETIRED
Colby Edgins		WEOTT	Carpenter
William Edgins		WEOTT	Tree Faller
Alan D. Yost		EUREKA	Salesman
Edward S. Smith		Fortuna	Retired
LELAND E. BARNES		FERNDALE	RETIRED
DALE R. Tompkins		Hesperia	RETIRED
WARREN JACKSON		RIO DELL	Normal
Robert N. Hansen		McKinleyville	Ret'd Aerospace Eng
DAMIAN BERTAIN		FORTUNA	TELEPHONE Co.
MICHAEL BURNS		RIO DELL	ML
DAVID C. STRAIT		COBB	COUNSELOR
Denise Swearney		Rio Dell	Retired
SHAWN GRUNDMAN		Rio Dell	CPTA
AARON MANSON		EUREKA	OPERATOR
DALE S HARVEY		Rio Dell	Holder / Mortimer



To: Ken Wiseman; Executive Director MLPAI  
Melissa Miller-Henderson; Program Manager MLPAI

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Print Name	Signature	Town	Occupation
Jerry D. Chapra		Paradise CA	Insurance Broker
DUSTIN CRONIN		LATONVILLE, CA	FARMER
DANIEL YORK		SHELTER COVE	RETIRED
Brennen Semmes		Eureka CA	Fisherman (Commercial)
MATT DALLAM		Eureka, CA	Fisherman (Commercial)
JIM MINDOUS		EUREKA CA	WHOLESALE
RICHARD MURRAY		WHITETHORN	RETIRED
Vicki Morris		White Thorw	Retired
Carrie Hebard		Shelter Cove	Unemployed
Jakal Uribe		Shelter Cove	School Student
Douglas Coyle		Eureka	Student
LAVONNE MOSER		Placerville CA	Retired Teacher
DEBRA SALVUCCI		Shelter Cove	Self Employed
BARRETT SKINNER		Shelter Cove	Unemployed
Mariah Garcia		West Sacramento	Biologist
Jay Doe		Colusa, CA	"
Susan L. Fox		Shelter Cove	Retired
JAMES DOTT		Shelter Cove	mechanic
DANIEL COCKING		SHELTER COVE	RETI
Janice Zaugg		Shelter Cove	Retired
MICHAEL SHAPIRO		Shelter Cove	Construction
Josh Moody		Marina	coffee
JESSE QUIJANO		WROTH	Unemployed
JOAN HANZIK		Shelter Cove	Self emp.
Steve Schou		Shelter Cove	SELF



To: Ken Wiseman; Executive Director MLPAI  
Melissa Miller-Henderson; Program Manager MLPAI

24 (10)

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Print Name	Signature	Town	Occupation
GLENN LALLY		Fieldbrook	Self Employed
RICHARD THORAS		McKinteyville	RETIRED
Lloyd Hayes		San Jose	" "
CURTIS SORENSEN		McKinteyville	RETIRED
DARREN FRAZIER		McKinteyville	LINEMAN
James Holland		Loleta	RETIRED
Andrew Barber		McKinteyville	Construction
Kris Sundeen		Bayside	Real Estate
Babett Matson		Mad River	Rancher
KEVIN WRIGHT		OROVILLE	WATER SURVEYOR
Bonnie Fells		Eureka	" "
DAVID COX		Fieldbrook	Sales
ADAM Gustafson		Eureka	Hiking Guide
Mary Kathleen O'Brien		Eureka	Server/Student
Edward S. Smith		Fortuna	Retired
Jason McIn		Eureka	COOK
Graham Johnson		McKinteyville	General Contractor
GILBERT H WALTON		FORTUNA	RETIRED
Bruce Dusi		Eureka	Guide
Robert Williams		Eureka	Construction
TROY Pastori		GARBERVILLE	CONSTRUCTION
		Redding	GROCERY CLERK
Donald Smith		Redding	TRUCK DRIVER
Ken Ballou		Vatna	teacher
MIKE NEPAT		EUREKA	CONTRACTOR

To: Ken Wiseman; Executive Director MLPAI  
Melissa Miller-Henderson; Program Manager MLPAI

25 11

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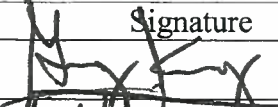
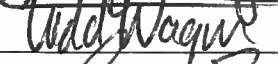




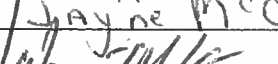
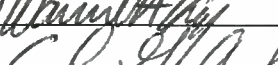
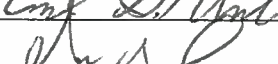
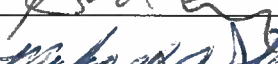

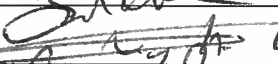









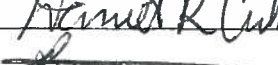
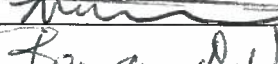


Print Name	Signature	Town	Occupation
V. Diane Adams	[Signature]	Shelter Cove	Retired Clerk
[Signature]	GARY WILCOX	WHITETHORN	CONST.
Richard Weber	[Signature]	Shelter Cove	Const.
Joshua Hatch	[Signature]	Shelter Cove	chief private contractor
JANEI PORTEOUS	[Signature]	Shelter Cove	RE Broker
Krista Clem-O'Sullivan	[Signature]	Shelter Cove	Consultant
David Gelman	[Signature]	Shelter Cove	Const.
Eva Carpenter	[Signature]	Shelter Cove	Waitress
Lynn Wright	[Signature]	S.C.	Business Owner
Chloe Bear	[Signature]	Gerba	retired
Magnolia	[Signature]	Shelter Cove	Deli
Will Beane	[Signature]	Shelter Cove	Self employed
Sara Machi	[Signature]	Shelter Cove	Self employed
David Hudson	[Signature]	Shelter Cove	laborer
Teri Brown	[Signature]	S.C.	laborer
SAUL SUTTON	[Signature]	FORTUNA/WHITE THORN	Self-employed
DENNIS COCKING	[Signature]	Shelter Cove	Rep. Tribble Garail
Chuck Warren	[Signature]	"	So. HUM.
Bill Finley	[Signature]	Shelter Cove	Electrician
Jason Andrews	[Signature]	Shelter Cove	Contractor
Joey Person	[Signature]	Shelter Cove	Contractor
Christy Orion	[Signature]	Whale Gulch	teacher
A. LICARD	[Signature]	SHELTER COVE	DESIGNER
B. Anderson	[Signature]	SHELTER COVE	
L. Patterson	[Signature]	Shelter Cove	Engineer
DON SACK	[Signature]	SHELTER COVE	COMM FISHERMAN



To: Ken Wiseman; Executive Director MLPAI  
Melissa Miller-Henderson; Program Manager MLPAI

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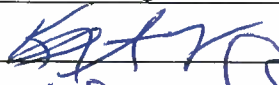

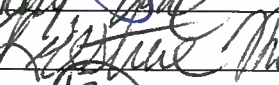

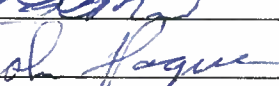


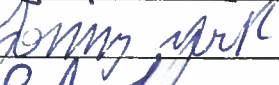
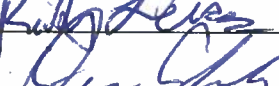


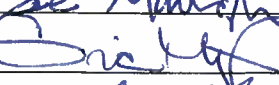


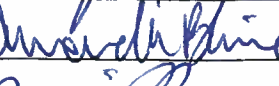


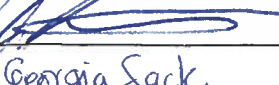

Print Name	Signature	Town	Occupation
GREG KING		EUREKA, CA.	SPORTING GOODS SALES
TODD WAGNER		EUREKA, CA	SALES
AARON MANGON		ARCATA	HEAVY EQUIPMENT OPER.
REED GATTON		MC KINLEYVILLE	SPORTING GOODS SALES
ALAN RICE		EUREKA, CA	SPORTING GOODS
JOSEPH REYNOLDS		FORTUNA, CA	CARPENTER
Jayne McCain		EUREKA, CA	Admin Secretary
Daniel King		Arcata, Ca	Coast Supervisor
Carl G. Anderson		Trinidad, CA	Biologist/Harvester
GARY L. NUNN		EUREKA, CA	SELF
Michael A. Stewart		EUREKA, CA	Mill Worker
Brad Hobbs		Eureka, CA	landscaper
Greg Rice		Eureka, CA	Sales / Sporting Goods
Tom Lunn		MIRANDA, CA	Operating Engineer
Randy Nielsen		ARCATA, CA,	TRUCK DRIVER
Math Fossel		Eureka, CA	Student
Nancy Argo		Bradisi, CA	Teacher
CASEY PALLEN		Eureka, CA	Optician
RICHARD KING		HEREDIA, CA	RETRIEVED
Dustin Vega		San Jose Ca	Student
Jason Thompson		Eureka	Deputy
ANDREW WELTZ		ARCATA	BIOLOGIST
Dan Culver		Eureka	Construction
PAT McNeil		Eureka, CA	Regional Director
Ben VanZandt		Eureka, CA	Rest



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Melissa Miller-Henderson; Program Manager MLPAI

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Print Name	Signature	Town	Occupation
KEITH AG. FORD		Redway	Carpenter
Kanjee Malong		Shelter Cove	DEP!
TOO NOSE		Shelter Cove	line man
KISSY NOSE		Shelter Cove	unoccupied
Hubert Wright		Shelter Cove	business owner
Kevin M. Joffe		Redway	Rec fisherman
JOHN ROGUE		Phillipsville	Retail
SHIRLEY ADLER		Phillipsville	DISABLED
Tina Hennessey		Sol Lake Tahoe	MECHANIC
JEFF LANE ROSE		Whittier	FARMER
Tommy York		Shelter Cove	Pizza shop/Lottery Shop
Rick Lemos		Beckland	unemployed
Devan C. Curry		Shelter Cove	Clown
Erin Gienget		Whitethorn	Self
TIM OSEN		Whitethorn	FIRE CHIEF
DEE MARENGLI		Shelter Cove	CONTRACTOR
ERIC MYERS		Shelter Cove	J
Carla Laney		Shelter Cove	business owner
Ivy Etter		Shelter Cove	Mom
Al Winton		Redding	Bldg Contractor
Amarch Blaine		Shelter Cove	bartender
JASON RICE		Shelter Cove	Cook
ANDREW WATERS		Shelter Cove	CARPENTER
Jesse Robinson		Shelter Cove	Electrician
John Stewart		Redway	Consultant
GEORGIA SACK		Shelter Cove	HSU STUDENT

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Print Name	Signature	Town	Occupation
Tracy Watkins	[Signature]	Redway	Retail
GARY BLAKESLEE	[Signature]	Redway	Service
Richard Kehoe	[Signature]	Whitethorn	Painter
Dave Wright	[Signature]	Geyserville	Dental tech
Tracy Wright	[Signature]	Geyserville	Firefighter
Andy Freed	[Signature]	Shelter Cove	Retired
Annette Bohannon	[Signature]	Shelter Cove	RETIRED
GARLAND JEFF	[Signature]	Shelter Cove	RETIRED
Larry Patterson	[Signature]	Diamond Springs	Engineer
Zach Patterson	[Signature]	Diamond Springs	Chairman
Jim Coats	[Signature]	Marysville	Retired
Bar Wilson	[Signature]	Garberville	Carpenter
Jeff Mock	[Signature]	Tracy Ca	Electrician
Teresa Tam	[Signature]	San Jose, CA	Insurance Broker
Cole Wilson	[Signature]	Garb.	Carpentry
Herbert King	[Signature]	Berkeley	Landscaper
Jody Campbell	[Signature]	Vallejo	Car Wash
Jett Lee	[Signature]	Emeryville, CA	Cafe Owner
William Bobb	[Signature]	Garberville	Commercial Fisherman
Joel Sigurdson	[Signature]	Clifton	School Counselor
Joanne Boyd	LIANE BOYD	Shelter Cove	Home Care
SAGE Koenig	[Signature]	Shelter Cove	Construction
Glen Haack	[Signature]	McKinleyville	Retired
[Signature]	[Signature]	Eureka	Glass Blower
DENNIS HENRY	[Signature]	Whitehorse	Retired



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Print Name	Signature	Town	Occupation
Chet Edeline		Shelter Cove	Retired fisherman
Mona Allison		Shelter Cove	retired
Karen January		Smartsville	Upholstery
Michael Paquet		Shelter Cove	Contractor
Chuck Thompson		Shelter Cove	contractor
Linda Thompson		Shelter Cove	life observer
Steve Ross		San Rafael	Merchant Marine
Dogina Jopay		Novato	Administrative
CHRIS MATTHEWS		NOVATO	DRAFTSMAN
Jameson Hutson		White Horn	Carpentry
BRIAN LISTER		SAN RAFAEL	Green CONTRACTOR
Dee Bass		Redwood	Construction
JERRY		Redwood	Construction
Nicholas Weatherholt		Eureka	Fisheries Technician
DAVID BAKER		SAN DIMAS	ENGINEER
Richard Gillaspie		Chico	CPA
Matt Hilbrink		Davis	Mgr
JERI MALONE		Shelter Cove	RN
Andrew Ford		Shelter Cove	Student
MAUREEN SMITH		Shelter Cove	Mommy
MATTHEW SHIMON		Shelter Cove	Pilot
Delisa Shimon		Shelter Cove	Flt. Attendant
Charles May		Shelter Cove	retired
Harold R. Lindau		McKinleyville	Retired
MACELLA LINDAU		McKinleyville	Retired / comp



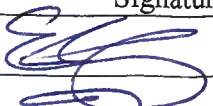



To: Ken Wiseman; Executive Director MLPAI  
Melissa Miller-Henderson; Program Manager MLPAI

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From: Citizens Alliance - wishing to vote for no additional MPAs in the North Coast Region allowing only the existing Punta Gorda State Marine Reserve.

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Print Name	Signature	Town	Occupation
Elizabeth Mackay		Eureka	Teacher
On Soria DE		Fullerton	Mechanic
Karen Schade	Karen Schade	Fullerton	Homemaker
Merle Gier	Merle Gier	St. Geo UT	Retired
Conley Brown	Conley Brown	Eureka	retired
Bill Murphy	Williams Murphy	Take City	CARPENTER
Charles McElroy	Charles McElroy	S. Cone	NO
Nellie Suffelt	Nellie	S. Cone	Retired
Tom Kelly	Tom Kelly	S.C.	Ret
Jo Ann Kelly	Jo Ann Kelly	S.C.	Ret
John Kelly	John Kelly	SC	Retired
Rachel Connor		SC	consultant
Karen B. McGraw	Karen B. McGraw	Homeport SC	Retired/Disabled
Patty Nagy	PATTY NAGY	"	"
Patricia Hensley	Patricia Hensley	Whithorn	retired
TRICIA DATHG		SC	retired
WARREN HESLEY	Warren Hensley	SC	"
DAVID T. SHULAT	David T. Shulat	SC	Motor
Trent Stote	Trent Stote	SC	Fisherman
Janet Lopez	Janet Lopez	Shelter Cove	Retired
Joe Lopez	Joe Lopez	Shelter Cove	retired
Phillip HARRIS	Phillip Harris	Shelter Cove	Retired
ERI HARRIS	ERI Harris	Shelter Cove	Retired
Alan E. Sievert	Alan E. Sievert	Pacific, Ca.	Retired
DAVID PALLI	David Palli	PACIFICA CA	Retired

To: Ken Wiseman; Executive Director MLP AI  
Melissa Miller-Henderson; Program Manager MLP AI

7-19-10

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Print Name	Signature	Town	Occupation
John H. Cathey	John H. Cathey	Redcrest	Retired
James B. Abrende	James B. Abrende	Rio Dell	Retired
Susan Etter	Susan L. Etter	Petrolia	Rancher
James Etter	Jim Etter	Petrolia	Rancher
Thomas Grundman	Thomas Grundman	Rio Dell	Retired
GARY LEVAND	Gary A. Levand	RIO DELL	mechanic
Pierce Baymiller	Pierce Baymiller	Scotia	Mgt.
Ron Killingsworth	Ronald A. Killingsworth	Scotia	Blue Collar
Billy Evans Jr	Billy D. Evans	Fortuna	Equip Operator
Lance Bravo	Lance Bravo	Scotia	logger
Billy Belmont	Billy Belmont	Scotia	
Mike Fuller	Mike Fuller	Scotia	FLG Installer
Church Cresswell	Church Cresswell	Rio Dell	Equip Operator
Tim Nickols	Tim Nickols	Blue Lake	LINEMAN
Chuck Roberts	Charles Roberts	Fortuna	City of Fortuna
Mike Mullinex	Michael S. Mullinex	Redway	Pitt-Proof Kennels
Allen Wallace	Allen Wallace	RIO DELL	
Dillon Lewis	Dillon Lewis	Fortuna	Painter
John Lewis	John Lewis	Fortuna	Painter
Jim Pontes	Jim Pontes	Fortuna	Contractor
JIM ANDROS	Jim Andros	EURERA	WHOLESALE (FISH)
Betty J. Thomas	Betty J. Thomas	WEOTT	Retired
CHARLES L. THOMAS	Charles L. Thomas	" "	" "
KEVIN EDRENIE	Kevin Edrenie	RIO DELL	SALES
Anthony Connetto	Anthony Connetto	Oydesville	RETIRE

To: Ken Wiseman; Executive Director MLP AI  
Melissa Miller-Henderson; Program Manager MLP AI

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Print Name	Signature	Town	Occupation
Kenny George	Kenny G.	Garberville	IHSS
Eric Martin	Eric Martin	Garberville	Self Employed
JON KUCHAR	Jon C. Kuchar	SAN DIEGO	RETIRED
Lori Brower	Lori Brower	SAN Diego	RDA
Robert Breshears	Robert Breshears	Burney	Retired
NORMAN L HAWK	Norman L Hawk	Piercy	Retired
Tyler Lemis	Tyler Lemis	Garberville	Truck driver
Amber Lewis	Amber Lewis	Garberville	Self employed
Lorie Whitney	Lorie Whitney	Twin Falls, ID	Professional
Art (Adriana)	Art (Adriana)	Chino Valley AZ	Retired
Kathy Wilson	Kathy Wilson	Prescott, AZ	Retired
Mike Whitney	M. W.	Garberville, CA	Store Owner
Mild Anderson	Mild Anderson	Urepool	Soldier.
Lesley Hantley	Lesley Hantley	Redruth UK	Dental Nurse.
Kirk Orr	Kirk A. Orr	Penn Valley CA	Contractor
John Carr	John Carr	Alderpoint	Guide
Michael F. Syerley	Michael F. Syerley	Garberville	Contractor
Ernie Sweet	Ernie Sweet	Shelter Cove	Contractor
James Mahan	James Mahan	Berkav	Self employed
Sean Finley	Sean Finley	Shelter Cove	contractor
John Pogue	John Pogue	Phillipsville	Retired
Terest Brown	Terest Brown	Miranda	Sporting Goods
Claire Paulsen	Claire Paulsen	Castro Valley	Teacher
Sam Wilber	Sam Wilber	Miranda	construction
Jesse Molk	Jesse Molk	alderpoint	Self employed



To: Ken Wiseman; Executive Director MLP AI  
Melissa Miller-Henderson; Program Manager MLP AI

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Print Name	Signature	Town	Occupation
Catherine Smith	Catherine Smith	Hidden Valley	School BUS Driver
Matt Smith	Matthew Smith	Clearlake	computer Science
Genny Stiles	Jenny Stiles	Santa Rosa	Admin.
Ken Voth	Ken Voth	Whitehorn	Equipment Operator
Ph. ACKRAS	Ph. ACKRAS	HA/FORK	SELF.
ROSS Johnson	Ross Johnson	Redway	Self
C. Thompson	C. Thompson	Whitethorn	Refineries Restorationist
Dave DeBomery	Dave DeBomery	Redway	Retired
Tony Centeno	Tony Centeno	Piercy	Semi Retired
JEFF HANSEN	Jeff Hansen	Piercy	Capitulation
James C. Connolly	James C. Connolly	EL Rock	CONTRACTOR.
Bryan Morris	Bryan Morris	Miranda	Self
Nathaniel Murrie	Nathaniel Murrie	Eureka	Self
Vernon Harber	Vernon Harber	Tracy #60	Retired
Tristan Wilhoit	Tristan Wilhoit	Redway	hardware
Li Braverman	Li Braverman	Whitethorn	Self
Greg Echiz	Greg Echiz	Arroyo	Self
Leilani Burch	Leilani Burch	Miranda	Retired
Mark Arthur	Mark Arthur	Piercy	Environmental Engineer
<del>Lynn Harrington</del>	<del>Lynn Harrington</del>	<del>Redway</del>	<del>Self</del>
Lynn Harrington	Lynn Harrington	Redway	Self
marcel Doane	marcel Doane	Redway	Self
Amanda Heppers	Amanda Heppers	Redway	Self
Jonah Greenfield	Jonah Greenfield	Calverville	Self
Matthew Nelson	Matthew Nelson	Los Angeles	Web Developer

To: Ken Wiseman; Executive Director MLP AI  
 Melissa Miller-Henderson; Program Manager MLP AI

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Print Name	Signature	Town	Occupation
Jon Benton	[Signature]	Shelter Cove	Architect
Eric J. Lively	[Signature]	Shelter Cove	MUSICIAN
Crystal L. Worthy	[Signature]	Shelter Cove	—
Judy Kuttel	[Signature]	Shelter Cove	TEACHER
RICHARD KUTTEL	[Signature]	Shelter Cove	Retired
Pet Jarabanic	[Signature]	Shelter Cove	Retired
SAUDRA KING	[Signature]	Shelter Cove	Retired
Cheryl Antony	[Signature]	Shelter Cove	Firefighter, EMT-1
Michael C. Yates	[Signature]	Shelter Cove	Retired
Sydney M. Donald	[Signature]	Shelter Cove	Student
Roger Woodmull	[Signature]	San Diego	consultant
STEVE WALDRON	[Signature]	Anderson	LINEMAN
Mike McWhorter	[Signature]	Anderson	Route Sales
Kerri McWhorter	[Signature]	Anderson	
Kevin Canada	[Signature]	REDWAY	PET
Laura Walrea	[Signature]	Anderson	Kids High
Nedra O'Steen	[Signature]	"	retired
Ronald O'Steen	[Signature]	"	"
Maryellen McKee	[Signature]	Whitefish	Preservation
Ruben RAMOS	[Signature]	Caberville	construction
ROB JENSON	[Signature]	R. B. BETHA	HOIST OPERATOR
Pam Armstrong	[Signature]	Shelter Cove	none
Mickey Baldwin	[Signature]	Redondo Beach	
Mark Jensen	[Signature]	Shelter Co.	Teacher
MATT SCOTT	[Signature]	Caberville	Investor

To: Ken Wiseman; Executive Director MLP AI  
Melissa Miller-Henderson; Program Manager MLP AI

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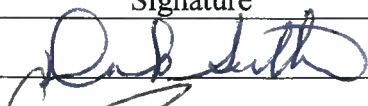

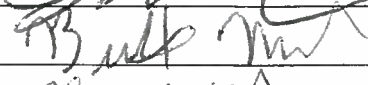


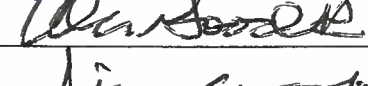
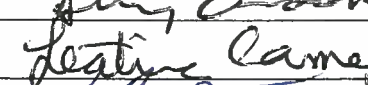

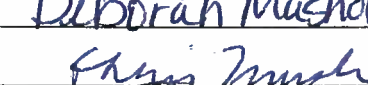


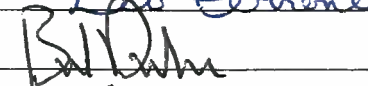

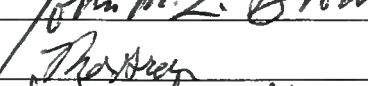


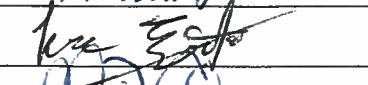


Print Name	Signature	Town	Occupation
Scott Allardice	Scott Allardice	Fortuna	Shaffer's Ace
CF Goodwin	Charles Goodwin	Eureka	Retail Sales
Janet Richards	Janet Richards	EKA	Retail
Racy Mathers	Racy Mathers	Eureka	Retail
Glenn Lally	Glenn Lally	Fielding	Self Employed
Lloyd Heins	Lloyd Heins	EUREKA, CA	CATV
Jim Tanner	Jim Tanner	Eureka	Papa's Mineral
Joseph Morgan	Joseph Morgan	Eureka	Restaurant Owner
Steve Downing	Steve Downing	EUREKA	Commercial Fish Buyer
CHARLES C WILLIAMS	Charles C Williams	EUREKA 95503	Retired - Tax Preparer
Lonnie Dolan	Lonnie Dolan	RIO DEL	Mill Work
Wynlon Lally	Wynlon Lally	Fielding	ROOFER
Joy Fuller	Joy Fuller	Eureka	Self-employed
Floyd Squires	Floyd Squires	Eureka	self employed
Gary Roden	Gary Roden	MIRANDA	RETIRED
JOHN MORRISON	John Morrison	EUREKA	RETIRED / Fisherman
Ben Williams	Ben Williams	Eureka	Retired Fisherman
Aaron Widmark	Aaron Widmark	Eureka	Sales
Darcy Brown	Darcy Brown	Eureka	
Trevi's Suite	Trevi's Suite	EKA	Contractor
Glenn Cremonesi	Glenn Cremonesi	Eureka	retired
Gwendolyn Johnson	Gwendolyn Johnson	Eureka	Retired
J.M. Johnson	J.M. Johnson	Eureka	Retired
Fred Darlington	Fred Darlington	AREATA	Retail
DEETIE McVAY	Deetie McVay	Eureka	Business Owner



To: Ken Wiseman; Executive Director MLP AI  
Melissa Miller-Henderson; Program Manager MLP AI

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Print Name	Signature	Town	Occupation
DICK SUTLER		Brookings OR	Retired
Giovani Madueira		Lincoln	Aviation tech
Bryan Scilacci		Fortuna	Dairyman
Brett Miller		Rio Dell	Mechanic
ALMA McReynolds		Mckinleyville	Retired
Shelia Rose		" "	"
VERNIN Smith		Rio Dell	Retired
ALAN GOOD II		mck	MANAGER
Jim Crook		mck	<del>the</del> owner operator
Leatrice Carney		mck	house wife
Walter Vance		Eureka	Timber Feller
Deborah Mustolt		HAYFORK	CODER
CHRIS MUSTOLT		HAYFORK	MAINT.
Locke Stockenbrod		Hayfork	Taxidermy
Molly Ploeger		Hayfork	Receptionist
Leo Perrone		Hayfork	Maint. Sup. MVIST
Brad Durbin		Eureka	UPS
Larry Schoenberger		Eureka	UPS
John M.G. Brown		Box 30 Petalia CA.	Rancher
Ronny Wesley Green		Ulrich	loader
John Snyder		Redwood City	Fisherman
Graham Barickla		Willow Creek	Rancher
Abe Fockert		Fortuna	Contractor
LEE ESTER		ARCATA	Cook
Christopher Anderson		Arcata	Village owner

To: Ken Wiseman; Executive Director MLPAI  
Melissa Miller-Henderson; Program Manager MLPAI

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Print Name	Signature	Town	Occupation
JOHN DAHLE		Shelter Cove	Retired artist
DENNIS COCKING		Shelter Cove CA	FOUNDER - SURFRIDER FOUNDATION
Laura Lameris		Shelter Cove CA	P.E.L.U. INTERNATIONAL Teacher
ROBERT LAMERIS		Shelter Cove	ARCHITECT
Johan Chuwa		Shelter Cove	Carpenter
Brittany Warren		Garberville	Student
Johnny Buckshot		G. Ville	Carpenter
Mike <del>W. Bae</del>		Cape Town	CEC
Marsha Pennington		Redway	Clerk
Josh Roberson		REDWAY	CLERK
Marie Etherton		Whitehorn	Education Paraprofessional
LUKE SHOCKLEY		HONEYDEW	CARPENTER
ED MILLIGAN		CURRENT CITY	TUG BOATMAN
MATE SHIMON		Shelter Cove	Pilot
VIM COURTOIS		BRKELAND	GEN. CONTRACTOR
Robt. C. Neal		Alameda	Retired
Elizabeth Vencill		Medford	laboratory parent HHA, MBA, MHA, PDI
Ryan Baxter		McKinleyville	Songor
Macrina Pullam		Frisco	Land Surveyor
Sian Tallero		Shelter Cove	Construction
DAVID GOLD		St. Helena	VEGETARIAN
Xenia		Alderspoint	C.N.A.
Laura Champion		Shelter Cove	
PAUL G. ADAMS		Shelter Cove	Coach

To: Ken Wiseman; Executive Director MLPAI  
Melissa Miller-Henderson; Program Manager MLPAI

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Print Name	Signature	Town	Occupation
Judith A. Bogs	Judith A. Bogs	Shelter Cove	Retired
FRANK R. BASSO	Frank Basso	SHelter Cove	Retired
Tesia Beauchene	Tesia Beauchene	shelter Cove	mother / Homemaker
ROBERT NOLTE	R.S. Nolte	shelter Cove	Carpenter
RAY Bevitoni	Ray Bevitoni	SC	Commercial Stripper (fisherman)
CONRAD CHRISTIANSON	Conrad Christianson	SHelter Cove	PAINTER-
ROBERT Hamilton	Robert Hamilton	Shelter Cove	Sherriff Deputy
Mac Anderson	Mac Anderson	S. Cove	RETIRED
Mira Davis	Mira Davis	Shelter Cove	waitress
Joey Noddes	Joey Noddes	Shelter Cove	Artist
Jared Johnson	Jared Johnson	Shelter Cove	landscaping
Audrey Heitfeldt	Audrey Heitfeldt	Gratuity	Wife
Nancy Sohn	Nancy Sohn	Potomac MD	Coach
Wendy King	Wendy King	Huntington Beach	Adventurer
Bob King	Bob King	Huntington Bch.	Fox Seeker
Robert Frostie	Robert H. Frostie	Shelter Cove	General Contractor
Chris Aslam	CHRIS ZASTROW	S.C.	Retired
Andrew Baldwin	Andrew Baldwin	S Cove	Floor Contractor
Bill Eybinks	Bill Eybinks	S. Cove	Retired
Larry Rautman	Larry Rautman	S. Cove	Fisherman SC Commercial
Todd Wick	Todd Wick	S. Cove	Fisherman
Rick TOTTER	Rick TOTTER	S. Cove	Rancher
Olisa Henninger	Olisa Henninger	Bucala	SW
Bob Downing	Bob Downing	S Cove	Elot / Fisherman SC Commercial
NOEL MANNERS	Noel Manners	COVE	BUSINESS



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Robert Johnson	Robert Johnson	EUREKA	Firearms Dealer
Bob Bettin	[Signature]	McKinleyville	RETAIL <sup>FISHING</sup> /HUNTING
Don Smith	[Signature]	EKA	INSP.
Ally Day Lynn	[Signature]	Arcata	Distributor
Andy R. Gudney	[Signature]	Eureka	Retired
Tom Cartwright	[Signature]	FORTUNA	X-RAY Technologist
Eric O'Ferrall	[Signature]	Kneeland	Painter
Justin Kelly	[Signature]	Arcata	Retail - Hunting / Fishing
Paul Windham	[Signature]	Bayside	physician
Jan Zeiter	[Signature]	McKinleyville	Retired
Patricia Kilt	[Signature]	eureka	workcamp
MAEK SANTSCH	[Signature]	EUREKA	
Eligbeth Moore	[Signature]	Eureka	housewife
Brett Towell	[Signature]	McKinleyville	Firefighter
JERRY HAYES	[Signature]	Eureka	RETIRED
John Shelton	[Signature]	Eureka	Water/Wastewater Maintenance
GARY BURSE	[Signature]	EUREKA	CITRUSER BOAT OWNER/COPI
Molly Glasper	[Signature]	EUREKA	Small Business Owner
Kaine Glasper	[Signature]	Eureka	Student
Jo Ann DeNoma	[Signature]	Fields Landing	Mother
Willie Swan	[Signature]	Fields Landing	Student
Polly Vickers	[Signature]	Rio Dell	Mother
Jerry L. Vickers Jr	[Signature]	Rio Dell	Hunting Guide
Kevin G DeNoma	[Signature]	Fields Landing	Small Business owner
SAMMY STAESUEN	[Signature]	Fuller Cove	Const

7-19-10

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[illegible]

2

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[illegible]



7-19-10

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[illegible]

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[illegible]



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[illegible]



# SUPPORT MARINE PROTECTED AREAS IN CALIFORNIA



© Terrance McNally/Arcata Photo

## Dear Assemblymember Chesbro:

We, the undersigned, support the Marine Life Protection Act and urge you to encourage a science-based, community-oriented marine protected area network along the North Coast.

The coast and ocean are not only an important part of the North Coast economy, but key to our quality of life. Much like our renowned state and national redwood parks, an effective network of marine protected areas will create safe havens for wildlife. If grounded in science, that network will ensure our fishermen and others who depend on the ocean's harvest are able to do so generations into the future.

Thank you for your work to support the protection of healthy oceans for our kids and grandkids.

Denise Seeger

Name (please print)

Humboldt

County of Residence

Contact Email

Liz Sandstrom

Name (please print)

HUMBOLDT

County of Residence

HSUDIVECLUB@GMAIL.COM

Contact Email

CAROL MORSE

Name (please print)

HUMBOLDT

County of Residence

CFMNEWSONG@RENINET.COM

Contact Email

entered 8-9

Name (please print)	County of Residence	Contact Email
Jordan Rae	Humboldt	Jordan-rae-race@yahoo.com
Name (please print)	County of Residence	Contact Email
Jeff Muir	King	jeffmuir5min
Name (please print)	County of Residence	Contact Email
Angelo Hamez	Fortuna	Obi-mace12@hotmail.com
Name (please print)	County of Residence	Contact Email
Caryn Beiter	Humboldt	
Name (please print)	County of Residence	Contact Email
Bridget Barsotti	Humboldt	
Name (please print)	County of Residence	Contact Email
Michael Blukhteyn	Humboldt	MIKBLIKE@gmail.com
Name (please print)	County of Residence	Contact Email
Vanessa Insan	Humboldt	
Name (please print)	County of Residence	Contact Email
Louisa Gould	Humboldt	louiffrica@yahoo.com
Name (please print)	County of Residence	Contact Email
Donna Smith	Humboldt	
Name (please print)	County of Residence	Contact Email
Name (please print)	County of Residence	Contact Email
Name (please print)	County of Residence	Contact Email
Name (please print)	County of Residence	Contact Email
Name (please print)	County of Residence	Contact Email

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Thank you for your work to support the protection of healthy oceans for our kids and grandkids.

Michael Turner

Name (please print)

Humboldt

County of Residence

Contact Email

Edward Tanner

Name (please print)

Humboldt

County of Residence

Contact Email

Elizabeth Thomas

Name (please print)



Los Angeles

County of Residence

Contact Email

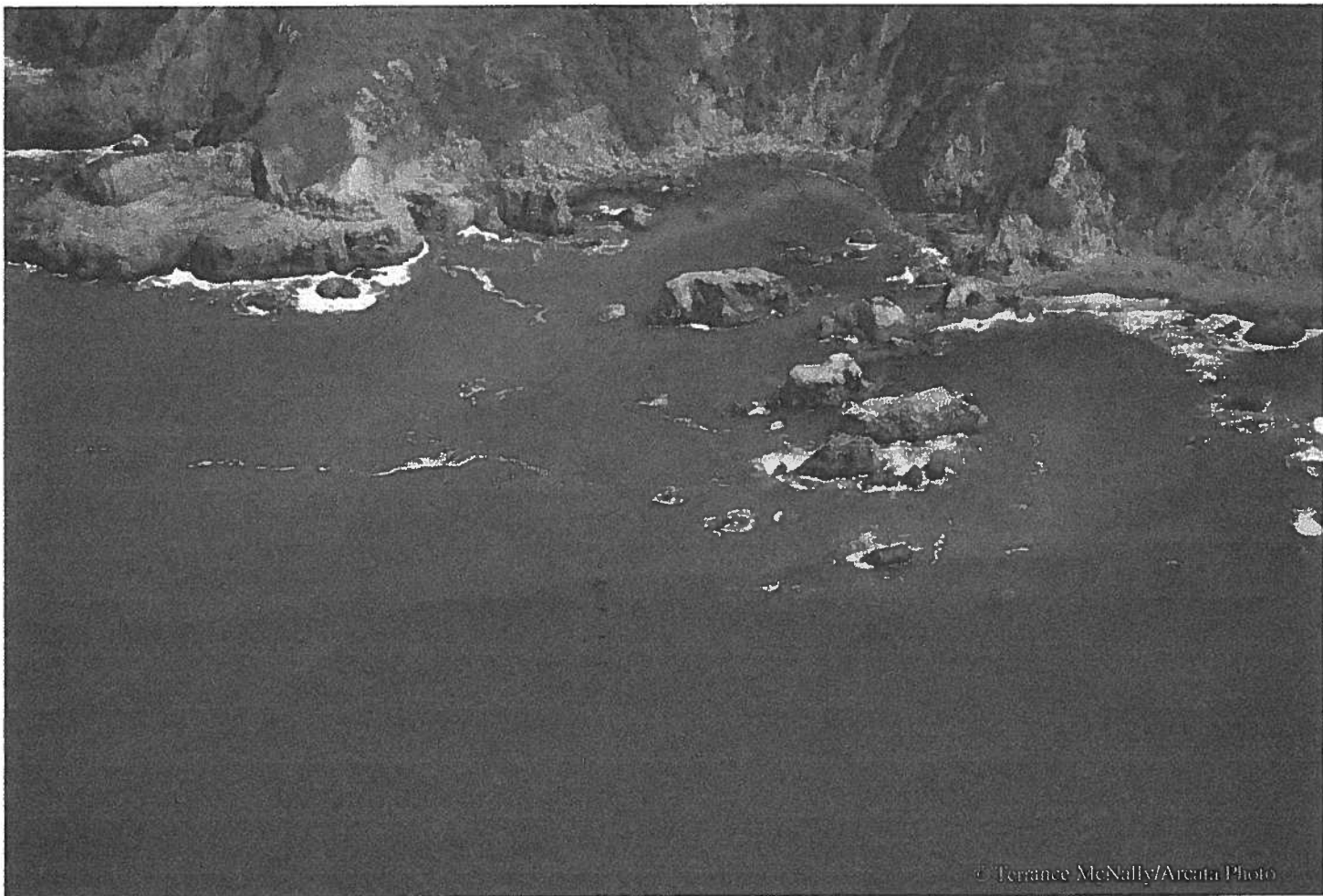
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Patricia Harris	CONTRA COSTA	—
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# SUPPORT MARINE PROTECTED AREAS IN CALIFORNIA



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## Dear Assemblymember Chesbro:

We, the undersigned, support the Marine Life Protection Act and urge you to encourage a science-based, community-oriented marine protected area network along the North Coast.

The coast and ocean are not only an important part of the North Coast economy, but key to our quality of life. Much like our renowned state and national redwood parks, an effective network of marine protected areas will create safe havens for wildlife. If grounded in science, that network will ensure our fishermen and others who depend on the ocean's harvest are able to do so generations into the future.

Thank you for your work to support the protection of healthy oceans for our kids and grandkids.

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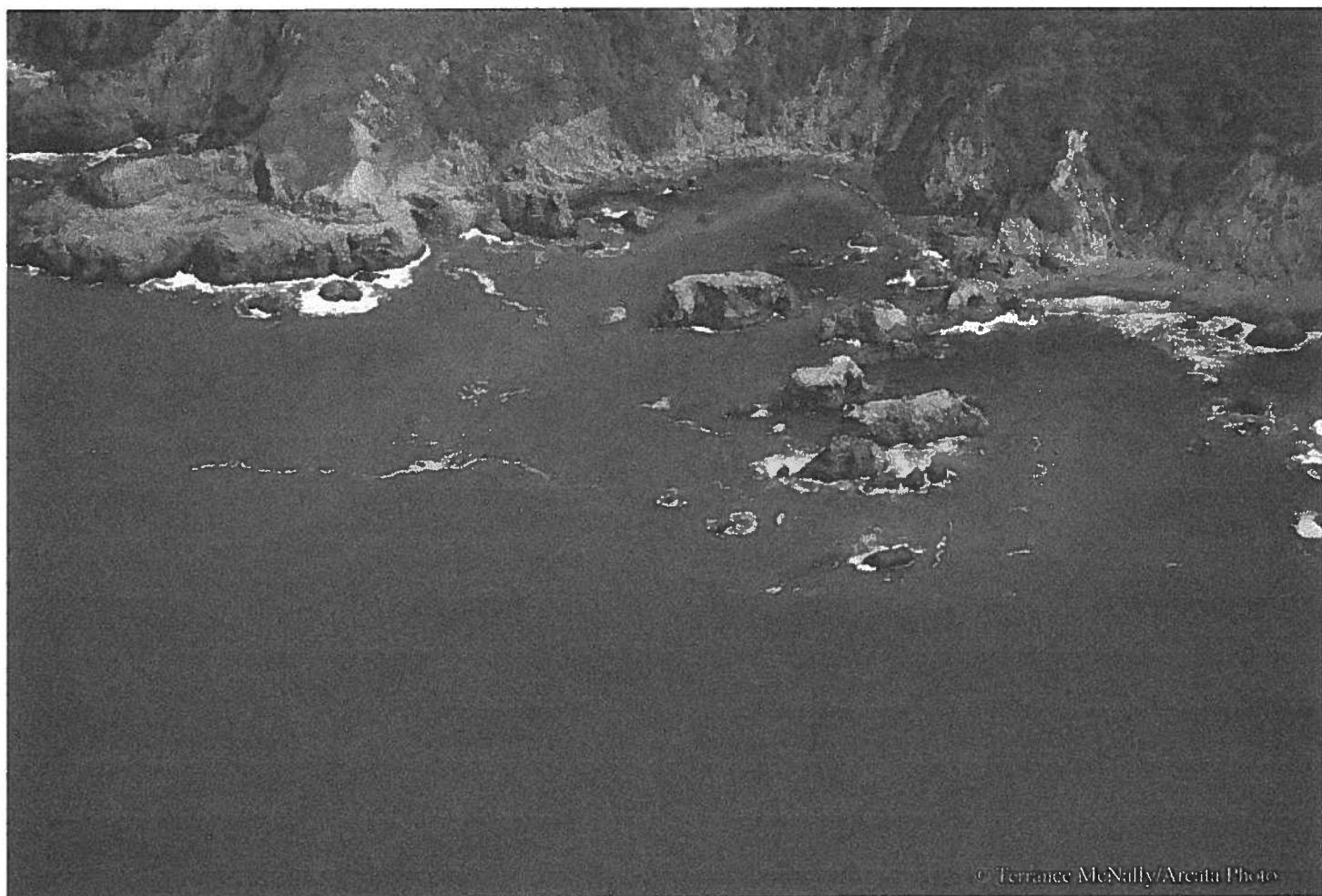
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County of Residence

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# SUPPORT MARINE PROTECTED AREAS IN CALIFORNIA



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Thank you for your work to support the protection of healthy oceans for our kids and grandkids.

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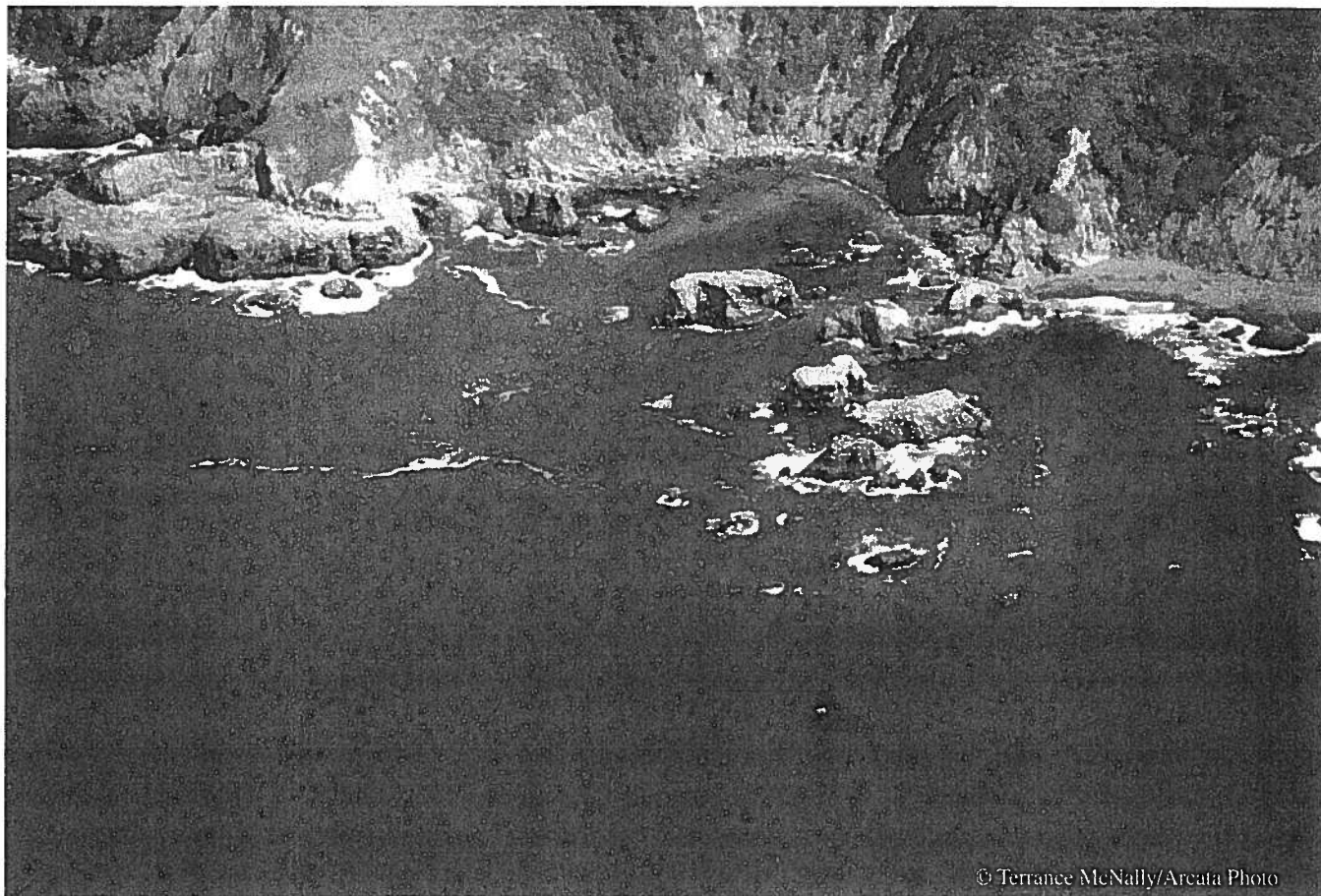
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Thank you for your work to support the protection of healthy oceans for our kids and grandkids.

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